DOCUMENT RESUME

ED 132 764 EC 092 064

AUTHOR	McGinty, John
TITLE	Project Echo: Evaluation of the Implementation and Replication of a Child Service Demonstration Project for Secondary Students with Learning Disabilities.
INSTITUTION	Southwest Educational Development Lab., Austin, Tex.
SPONS AGENCY	Bureau of Education for the Handicapped (DHEW/OE), Washington, D.C.
PUB DATE	Aug 76
CONTRACT	OEC-0-74-8723
NOTE	111p.; BEST AVAILABLE COPY
EDRS PRICE	MF-$0.83 HC-$6.01 Plus Postage.
DESCRIPTORS	Academic Achievement; Attendance; *Curriculum; *Educational Programs; Exceptional Child Research; Information Dissemination; *Learning Disabilities; Parent Participation; Program Content; *Program Evaluation; *Research Methodology; Secondary Education; Teacher Attitudes; *Teacher Education
IDENTIFIERS	*Project Echo; Texas

ABSTRACT

Presented are the findings of Project Echo, a research project designed to replicate an earlier study on a supplementary instructional program for secondary level learning disabled students. Brief introductory sections cover the three major project components (the instructional curriculum, the teacher training materials, and the classroom management handbook), the five replication sites in Texas, and the evaluation design. The bulk of the document is organized around 10 elements--academic achievement, student attendance, student dropouts, parent involvement, community information dissemination, teacher training, Project Echo dissemination, activity audit, instructional content mastery, and teacher perception. For each element, a report is provided which outlines the following: evaluation question of interest, instrumentation, design configuration, data analysis model, design implementation, and evaluation findings. The findings are noted to indicate that the effects of Project Echo intervention on secondary learning disabled students was positive and that the development of additional instructional minimodules in more subject areas should be seriously considered. Technical attachments are provided which include a paper on a screening process related to Project Echo; sample data collection forms; information on the methodology used to investigate student achievement, student attendance, and student dropouts. (SBH)

Documents acquired by ERIC include many informal unpublished materials not available from other sources. ERIC makes every effort to obtain the best copy available. Nevertheless, items of marginal reproducibility are often encountered and this affects the quality of the microfiche and hardcopy reproductions ERIC makes available via the ERIC Document Reproduction Service (EDRS). EDRS is not responsible for the quality of the original document. Reproductions supplied by EDRS are the best that can be made from the original.

ED132764

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

PROJECT ECHO

Evaluation of the Implementation and Replication of a Child Service Demonstration Project for Secondary Students with Learning Disabilities

John McGinty
Division of Evaluation and Research
Southwest Educational Development Laboratory
James H. Perry, Executive Director
Austin, Texas
August 1976

2

EC092064

Project Echo was funded under PL 91-230, Part G, by the Bureau of Education for the Handicapped, USOE, Contract No. OEC-0-74-8723 to the Texas Education Agency. The project was administered by Education Service Center Region XII, which subcontracted with the Southwest Educational Development Laboratory, in part, for preparation of this publication. The opinions expressed herein do not necessarily reflect the position or policy of the Bureau of Education for the Handicapped, the Texas Education Agency, or Education Service Center Region XII, and no official endorsement should be inferred.

EXCERPTS FROM THE REPORT

1. In all five Echo test sites, a screening and appraisal process was conducted to identify groups of learning disabled students...

2. The Language Arts and Mathematics minimodules were used more extensively with target students than were the Science minimodules.

3. Echo teachers were generally positive in their perceptions of the minimodules.

4. Cohort 1 students (16-year-olds) achieved two of the three achievement gain objectives.

5. Cohort 2 students (15-year-olds) exceeded all three achievement gain objectives.

6. Echo students in both Cohorts did not equal the performance gains of those students in the original test site.

7. At no test site was the objective that 90% of the Echo students would increase their rate of school attendance by 6% over their prior attendance history achieved.

8. The objective that 75% of the target students would increase their attendance by 10% over their prior record was achieved by two Echo student groups.

9. Two Echo student groups had attendance rates in 1975-76 which exceeded that of non-Echo comparison students in the same schools.

10. Fifteen-year-old Project Echo students dropped out of school less frequently than did either (1) all 15-year-old students enrolled in project schools during the two years prior to Echo implementation, or (2) non-Echo 15-year-olds in project schools during the implementation period.

11. At none of the Project Echo test sites were the Process Orientation Modules used with Echo teachers as they were designed to be used.

12. All Project Echo test sites reported contacts with at least one of the parents of every identified Project Echo target student in 1975-76.

13. (Dissemination) criteria were achieved at the three Echo test sites which elected to conduct information dissemination conferences for representatives of local business firms and civic organizations.

14. ...representatives of observer school districts did investigate Project Echo by observing project operations in the test schools.

15. From 80-90% of the observer school representatives had obtained sufficient understanding of the project on which to base an adoption-decision.

16. Some consideration regarding the possible 1976-77 adoption of all or part of Project Echo had occurred in all observer districts.

17. No coordinated (statewide) plan for creating Project Echo awareness among potential adopters has been implemented...

18. This study...does tend to indicate that Project Echo is replicable with a potential for beneficial influence on the education of learning disabled students.

CONTENTS

Introduction.....1

Project Echo Components.....3

Replication Sites.....5

Evaluation Design.....9

Format of this Report.....13

Project Echo Evaluation

Section 1. Academic Achievement.....15
Section 2. Student Attendance.....23
Section 3. Student Dropouts.....31
Section 4. Parent Involvement.....37
Section 5. Community Information Dissemination.....41
Section 6. Teacher Training.....45
Section 7. Project Echo Dissemination.....47
Section 8. Activity Audit.....51
Section 9. Instructional Content Mastery.....57
Section 10. Teacher Perceptions.....61

Summary and Recommendations.....69

Technical Attachments

1. Academic Achievement.....73

2. Student Attendance.....75

3. Student Dropouts.....77

4. Screening and Appraisal.....79

5. Data Collection Forms.....89

LIST OF TABLES

Table — Page

1. Project Echo Target Student Demographic Summary.....7

2. Number and Percentage of Target Students Exceeding Stated Grade Equivalent Gain Objectives on the Stanford Achievement Test in One or More of Three Subject Areas.....19

3. Number and Percentage of Target Students Exceeding Expected Grade Equivalent Gains on the Stanford Achievement Test.....20

4. Percentage of Target Pupils Demonstrating an Average Grade Equivalent Gain at the Rate of 1.0 G.E./Year in Project Echo Subject Areas.....21

5. Percentage of Echo Students Improving Attendance in 1975-76 Over Previous Attendance Records.....27

6. Mean Percent Attendance by Project Group and Site.....28

7. Percentage Difference in Echo Student Absenteeism Rate Compared to Absenteeism Rates of Two Reference Groups.....29

8. Student Dropout Data Summary by Group and Site.....34

9. Percentage Difference in Echo Student Dropout Rate Compared to Dropout Rates of Two Non-Echo Reference Groups.....35

10. Occurrence of and Attendance at Information Dissemination Conferences Conducted at Three Project Echo Test Sites.....43

11. Observer School Districts Selected by Echo Test Sites.....49

12. Attainment of Objectives - Language Arts Minimodules.....64

13. Attainment of Objectives - Mathematics Minimodules.....65

14. Attainment of Objectives - Science Minimodules.....66

15. Summary of Teacher Perceptions Regarding Echo Minimodules.....67

16. Comparison of Selected Project Echo Minimodule Implementation Variables by Subject Area.....68

INTRODUCTION

Project Echo was an outgrowth of a joint endeavor of four agencies[1] to produce and test a supplementary instructional program for learning disabled students at the secondary school level. That project, which began in 1972 and was completed in 1974, resulted in several products and processes--including 30 instructional units (minimodules), a classroom instructional management system, a teacher training package, a screening and appraisal process, a parent involvement component, and an information dissemination process[2]--which had been tested only in the developmental site, Corsicana (Texas) High School.

Evaluation data indicated the project to be generally successful.[3] The findings were considered tentative, however, because only the single test site was involved and most data collection was formative rather than summative in emphasis. The major recommendation of the cited report was that the project be replicated to determine its effectiveness with entirely new staff and students.

In following up on that recommendation, three of the four agencies (TEA, ESC XII, and SEDL) applied to the Bureau of Education for the Handicapped (BEH) for funding to replicate the project in five new test sites to begin in September 1974. The proposed replication was funded in January 1975.

---

1 The Corsicana Independent School District, the Texas Education Agency, Education Service Center Region XII, and the Southwest Educational Development Laboratory.

2 See the section of this document entitled "Project Echo Components" for a description of these products and processes.

3 The Corsicana L/LD Project for Fifteen-Year-Olds, Phase I - 1972-73 and Phase II - 1973-74, Southwest Educational Development Laboratory, July 12, 1974.

Based on applications submitted to TEA for participation in the replication effort, which was now officially designated Project Echo, five new test sites were selected. These sites all had in operation comprehensive programs of special education services (Texas Plan A) and represented the diverse range educational environments found among the more than 1100 school disctricts in the state.[4]

Because of the late start-up and the unanticipated amount of time required for screening and appraisal, very limited project implementation was accomplished in 1974-75. Continuation authorization was sought and received that would focus project implementation in the 1975-76 school year with two student groups (15- and 16-year-olds) rather than the one group as originally proposed. These groups were designated as Cohort 1, which consisted of 16-year-olds who had been identified in late 1974-75, and Cohort 2, the 15-year-olds identified at the start of the 1975-76 school year.

---

[4] See the section of this report entitled "Replication Sites" for a description of the selected sites.

PROJECT ECHO COMPONENTS

There are three major components to the Project Echo materials used during 1974-1975 and 1975-76: the instructional curriculum, called minimodules; the teacher training materials, called Process Orientation Modules; and the Classroom Management Handbook.

The instructional materials consisted of 30 minimodules in three content areas: Language Arts, Mathematics, and Science. Each content area contained 10 minimodules that included both teacher and student manuals with appropriate overhead transparencies, filmstrips, audio cassettes, ditto masters and student pads. Each minimodule contains pretests where appropriate as well as Mastery Tests.

The Process Orientation Modules were designed as teacher training materials for use by staff development personnel and consist of background information on language and learning disabilities, simulation exercises for teachers, and appropriate reading material. Each Module -- there are two -- contains overhead transparencies for group use as well as handout materials for reading and the simulation exercises.

The Classroom Management Handbook is designed for coordinators, teachers, and teacher aides. The handbook also presents background material on language and learning disabilities as well as a thorough description of all instructional materials and media. The remainder of the Handbook is devoted to a description of the pupil appraisal and screening process, the instruments used (or recommended), and the diagnostic processes recommended for management of the minimodules by LLD students within the normal school context.

Ancillary components include a recommended screening and appraisal process -- for identification of learning disabled students; a parent

involvement component -- for stimulation of parent-school communication; and a suggested information dissemination process -- for creating community awareness of the project's goals and activities.

REPLICATION SITES

Five test sites were selected to participate in the Project Echo replication effort. These sites included high schools in four school districts and selected members of an educational cooperative composed of several districts. Those selected represented a wide range of variance on several environmental factors: location, school enrollment, minority populations, district wealth, facilities available, and community size.

Galveston.[5] Galveston ISD's Ball High School is distinguished by its size. The school has a greater student enrollment than any high school in Texas. Galveston, a city of 61,809, is located in the southeast portion of the state on the Texas Gulf Coast. The school district has an average daily attendance of 10,805, including an estimated Project Echo target age enrollment of 1057 students.

Greenville. Greenville High School is located in this northeast Texas community of 22,043. Greenville is a commercial center for the immediate region -- which is largely devoted to agriculture. The district's average daily attendance is 4,825 -- 426 of whom are of Project Echo target age.

Laredo. Laredo is a city of 69,024, located on the Texas-Mexico border in the southwest portion of the state. Its school district has an average daily attendance of 19,622. Nixon High School Annex, which serves only ninth grade students, has an estimated enrollment of 601 Echo target age students.

---

[5] For these brief site descriptions, community populations were obtained from the 1970 U.S. Census, school district average daily attendance from the Texas Education Agency's Annual Statistical Report for 1973-74, and Echo target age student enrollment estimates from local school districts.

Plano. Plano is a rapidly growing suburban city located north of Dallas in north central Texas. Its 1970 population of 17,872 is estimated to have more than doubled since that time. Plano ISD in 1973-74 had an average daily attendance of 10,546 students. Haggard High School, which was first occupied in September 1975, has an estimated 468 students of Echo target age.

West Central Texas Educational Cooperative. The fifth Echo test site was composed of three member districts of a cooperative of several small districts in the west central portion of the state. Echo schools included those located in Colorado City (population 5,227), Sweetwater (population 12,020), and Roscoe (population 1,580). Average daily attendance in the three districts was 1490, 2603, and 456, respectively. A combined total of 395 students in the three high schools were of Echo target age.

Following implementation of the Project Echo screening and appraisal process in each of the five test sites, a total of 291 target students for project intervention were located. Table 1 provides a summary of the demographic characteristics of these students.

Two observations are worthy of note regarding the students. First, males are an obvious majority within the total group, particularly within the older Cohort 1 group. Second, the ethnic distribution figures illustrate the diverse ethnic composition found among the five selected test sites.

TABLE 1

PROJECT ECHO TARGET STUDENT DEMOGRAPHIC SUMMARY

Cohort 1	Galveston	Greenville	Laredo	Plano	West Central TX. Ed. Co-op	TOTAL
Number	38	16	0	37	24	115
Sex						
% Male	65.8	81.3	-	78.4	50.0	68.7
% Female	34.2	18.7	-	21.6	50.0	31.3
Age						
Mean	16.5	16.3	-	16.5	16.4	16.4
St. Dev.	0.3	0.2	-	0.3	0.3	0.3
Ethnicity						
% Anglo	36.8	81.3	-	100.0	75.0	71.3
% Mex. Amer.	13.2	6.3	-	0.0	20.8	9.6
% Black	50.0	12.5	-	0.0	4.2	19.1
Cohort 2						
Number	48	19	43	35	31	176
Sex						
% Male	50.0	63.2	46.5	60.0	48.4	52.3
% Female	50.0	36.8	53.5	40.0	51.6	47.7
Age						
Mean	15.4	15.6	15.5	15.5	15.4	15.5
St. Dev.	0.3	0.2	0.4	0.3	0.3	0.3
Ethnicity						
% Anglo	27.1	78.9	7.0	100.0	51.6	46.6
% Mex. Amer.	18.8	0.0	93.0	0.0	38.7	34.7
% Black	54.2	21.1	0.0	0.0	9.7	18.7

NOTE: Age expressed in years and tenths as of September 1, 1975.

EVALUATION DESIGN

Project Echo evaluation activities were focused on the 1975-76 school year, when the project was fully implemented in all sites. The evaluation design, prepared and distributed in June 1975, is reproduced in the following four pages. Elements of the design were selected to test, as indicated, effects in terms of project criteria which were based on the original objectives of the Corsicana project, and replication criteria which were based on data actually obtained in the original test site, Corsicana.

The evaluation design was organized into 10 sections -- each developed from stated project objectives or sets of related objectives. Within each section, an evaluation question of interest is stated. In most cases, this is a restatement of a project objective in interrogative form. For each question, the instrumentation or data collection procedure to be employed is then described. The column entitled design configuration illustrates the data collection and intervention sequences in symbolic notation[6] and describes the anticipated sample. The column farthest right describes the data analysis model to be employed and states the criteria by which the project will be judged.

---

[6] Adapted from Campbell, D.T., and J.C. Stanley, Experimental and Quasi-experimental Designs for Research. Chicago: Rand-McNally & Company, 1963.

QUESTION OF INTEREST	INSTRUMENTATION	DESIGN CONFIGURATION	DATA ANALYSIS MODEL
1. Do high school students, in each of two cohort samples (see Design Configuration), who have been diagnosed as learning disabled and who are exposed to one or more Project Echo instructional sequences in each of five Texas secondary schools, meet the following expected outcomes: a. 90 percent of the students will demonstrate a grade equivalent gain in one or more of the following academic subjects--language arts, science, and mathematics--at a rate of 0.8 grade equivalents per year? b. 75 percent of the students will demonstrate a grade equivalent gain in one or more of the three subject areas at a rate of 1.0 grade equivalents per year? c. 25 percent of the students will demonstrate a grade equivalent gain in one or more of the three subject areas at a rate of 1.2 grade equivalents per year?	1. Stanford Achievement Test Battery (SATB)--A comprehensive academic achievement battery consisting of ten subscales in four general areas--language arts, mathematics, science, and social studies. Subscale scores may be expressed as grade equivalents. Students will be administered the SATB appropriate to their reading comprehension level as determined during the screening and appraisal process. The 1964 edition-Form W or the equivalent 1974 edition-Form A may be administered.	1. For each of two cohorts within each of five Project Echo test sites: $I : O \begin{vmatrix} X_L \\ X_M \\ X_S \end{vmatrix} O$ where: I = identification as a Project Echo target student; O = administration of the SATB; and X_L = exposure (X) to one or more instructional sequences (1) designated by subscript L for language arts, M for mathematics, and/or S for science. Samples: Cohort 1 consists of 16-year-old students who were identified as LD during the spring of 1975. Cohort 2 consists of 15-year-old students who may be identified as LD in the Fall of 1975 prior to instructional exposure. Each cohort is anticipated to consist of approximately 50 students in each of five test sites--a total of approximately 500 students.	1. The project criterion will be considered to be achieved if each of the conditions specified in evaluation question of interest #1 are met. The replication criterion will be considered to be achieved if the following SATB results from the pilot test site are duplicated: the following percentages of pupils demonstrate an average grade equivalent (GE) gain at the rate of 1.0 GE per year. Language Arts - 51.0% Mathematics - 42.3% Science - 31.4%
2. Do high school students who are exposed to Project Echo in each of five Texas secondary schools, meet the following expected outcomes: a. 90 percent of the students will increase their rate of school attendance by 6% over their previous three-year attendance history? b. 75 percent of the students will increase their rate of school attendance by 10% over their previous three-year attendance history? c. Group mean attendance rate of target students will be 6% higher than the mean attendance rate of non-target students in the same schools during the implementation period? d. Group mean attendance rate of target students will be 6% higher than the mean attendance of those students over the previous three years?	2. Project Echo Student Attendance Forms--Two forms designed for tabulation of attendance data for students. The first form is for target students; the second for a comparison sample of students. The following data will be provided: Attendance records (days present, days enrolled) for each of estimated 250 target students in each of two cohort samples for 72-73, 73-74, 74-75, and 75-76. Same data for all non-target comparison student samples in each of the five schools.	2. For each of two cohorts within each of five Project Echo test sites: Target students: I O Non-target sample: O where: I = identification as a Project Echo target student; and O = collection of specified attendance data. Samples: Target students consist of the Cohorts 1 and 2 samples identified above. The non-target sample consists of all other students of the same age groups in each of the five test schools.	2. The project criterion will be considered to be achieved if each of the conditions specified in evaluation question of interest #2 are met. The replication criterion will be considered met if target student absenteeism decreases by 6% over their past three-year attendance record.

CONTINUED ON NEXT PAGE

PROPOSED EVALUATION DESIGN FOR PROJECT ECHO, 1975-1976

QUESTION OF INTEREST	INSTRUMENTATION	DESIGN CONFIGURATION	DATA ANALYSIS MODEL
3. Do high school students who are exposed to Project Echo in each of five Texas secondary schools, meet the following expected outcome: The rate of dropouts among the target students will be 2% less than the dropout rate among students of the same age groups in each school over the previous two years?	3. Project Echo Dropout Data-Gathering Form--The following data are provided: In each of five schools for the 75-76 school year number of target-group dropouts, number of target-group enrollees, number of non-target dropouts, and number of non-target enrollees; and in same schools for 72-73, 73-74, and 74-75, number of dropouts and number of enrollees in the same age range as Project Echo target students.	3. For each of two cohorts within each of five Project Echo test sites: Target students: I O Non-target sample: O where: I = identification as a Project Echo target student; and O = collection of specified dropout data. Samples: Target students consist of the Cohorts 1 and 2 samples identified above. The non-target sample consists of all other students of the same age groups in each of the five test schools.	3. The project and replication criteria will be met by achievement of a 2% decrease in dropout rate as specified in evaluation question of interest #3.
4. Do 80 percent of the parents of identified Project Echo target students in each of five schools attend 80% of the project's scheduled parent involvement activities during the project implementation period?	4. Parent Involvement Activity Register--The following data are provided: For each of five schools, number of parents of target students, number of planned parent involvement activities, and number of parents of target students in attendance at each activity.	4. For each Parent Involvement Activity at each test site: X O where: X = planned activity; and O = collection of attendance information. For this section of the design, "parent attendance" is defined as the physical presence of one or more adult members of the household in which a target student resides.	4. The project criterion will be met if 80 percent of the target students' parents attend 80 percent of planned Parent Involvement activities. No replication criteria will be applied.
5. Do representatives of business firms and civic organizations in each of the five Texas communities in which Project Echo is implemented attend one of two project information dissemination conferences conducted by the local project staff?	5. Project Echo Dissemination Conference Register--The following data are provided: Records of the occurrence and attendance at information dissemination conferences conducted for representatives of business and civic organizations in five communities.	5. For each Dissemination Conference at each test site: X O where: X = Dissemination Conference; and O = collection of attendance information.	5. The project and replication criteria will be achieved if two Dissemination Conferences are conducted.
6. Do classroom teachers who implement Project Echo instructional Minimodules in five schools demonstrate attainment of the concepts presented in the Process Orientation Modules?	6. Process Orientation Module Criterion-Referenced Measures--Instruments designed to determine attainment of concepts presented in the teacher orientation to Project Echo.	6. Within each project test site: X O where: X = exposure to process orientation modules; and O = assessment of concept attainment. The sample consists of classroom teachers of identified target students who use Language Arts, Mathematics, and/or Science Minimodules in five Texas schools.	6. The project criterion will be met if project teachers demonstrate attainment of an average of 80 percent of module concepts presented. There is no replication criterion as the process orientation modules were not employed in the pilot test site.

CONTINUED ON NEXT PAGE

QUESTION OF INTEREST	INSTRUMENTATION	DESIGN CONFIGURATION	DATA ANALYSIS MODEL
7. Do administrators and/or supervisors from the 25 observer schools demonstrate comprehension of information regarding the components and operation of Project Echo as implemented in five schools which is considered by the Project Director as information useful as input into the decision to adopt the model during 76-77?	7. These process data will be collected by informal interview with the Project Director.	7. The interview will be conducted prior to May 31, 1976.	7. Process data will be documented without specific identification of observer schools. Criterion will be achieved if one administrator or supervisor from each observer school is considered by the Project Director to comprehend operation of the Project Echo model.
8. Does an evaluation audit of the project implementation (intervention and replication strategies) in five schools indicate that the following activities and processes were accomplished as anticipated? a. The pupil screening and identification process? b. Use of instructional support materials with identified L/LD students? c. Observation of the operation of the L/LD model by representatives of the cluster associate schools? d. The adoption-decision process in the observer schools? e. Development of a statewide plan for dissemination of information about the model to all Plan A schools?	8. These audit data will be collected by informal interview with specific personnel associated with Project Echo: the Coordinator at each of the five test sites (questions 8a-8c), the identified administrator or supervisor from each of 25 cluster associate observer schools (question 8d), and the Project Director (question 8e). The interview may be conducted during a site visit or by telephone.	8. The data collection schedule may vary in different sites. All data will be collected prior to May 31, 1976.	8. Occurrence of each of the processes identified in evaluation question of interest #8 will be considered as attainment of criteria.
9. For each of 30 Project Echo instructional minimodules, do 80 percent of target students, after exposure to the project intervention, demonstrate mastery of 80% of the major instructional objectives addressed by the minimodules?	9. Minimodule Mastery Tests- a series of 30 criterion-referenced measures, each designed to test student mastery of the major instructional objectives of one of the 30 Project Echo minimodules. The series contains ten language arts tests, ten mathematics tests, and ten science tests.	9. For each target student: X_1O_1, X_2O_2,..., X_nO_n where: X = student exposure to one of a series of instructional minimodules; and O = assessment of objective mastery. Sample: Student samples consist of all identified target students who are exposed to one or more Project Echo minimodules.	9. Correct responses of 80% of the target students to 80% of the items of each Mastery Test will be considered indicative of mastery of the major instructional objectives of that minimodule. In addition to the basic analysis model, mastery test findings will be analyzed by student age group, sex, ethnicity, and test site to explore and document any possible mastery differences within these target student subgroups.

CONTINUED ON NEXT PAGE

QUESTION OF INTEREST	INSTRUMENTATION	DESIGN CONFIGURATION	DATA ANALYSIS MODEL
10. Following classroom use of each instructional minimodule with at least five students, do 80 percent of Project Echo teachers report that: a. a majority of the students demonstrated interest in the minimodule content? b. instructional time requirements were not excessive? c. preparation time requirements were not excessive? d. the quantity of materials and media provided was sufficient? e. the quality of materials and media provided was appropriate? f. the mastery test provided a valid indication of student learning? g. the instructional objectives of the minimodule were appropriate to the educational needs of most of the students? h. the vocabulary and reading level of student books was at an appropriate level for most of the students?	10. Teacher Checklist—a short form, employing a checklist format, designed to obtain teacher reports and perceptions regarding the use of Project Echo minimodules. Provision is made to allow open-ended teacher comments and suggestions for minimodule improvement. Completion of the checklist is anticipated to require 2-5 minutes for each minimodule used.	10. For each Project Echo teacher: X_1O_1, X_2O_2,..., X_nO_n where: X = use of one of a series of instructional minimodules with five or more target students; and O = completion of Teacher Checklist. Sample: Teacher sample consists of all Project Echo classroom (and/or resource room) teachers who use one or more minimodules with five or more target students.	10. Affirmative responses of 80 percent of the teachers using each Project Echo minimodule to Teacher Checklist items addressing each area of concern identified in question of interest #10 will be considered as attainment of criteria.

FORMAT OF THIS REPORT

The main body of this report is organized around the 10 elements, or sections, of the evaluation design which was reproduced on the preceding pages. For purposes of clarity, each section is given a short title which describes the central focus of that portion of the evaluation. Titles used for the report sections are:

1. Academic Achievement
2. Student Attendance
3. Student Dropouts
4. Parent Involvement
5. Community Information Dissemination
6. Teacher Training
7. Project Echo Dissemination
8. Activity Audit
9. Instructional Content Mastery
10. Teacher Perceptions

These sections are in the same sequence as the 10 elements of the evaluation design. Each page is identified by section number and title. In this way, the reader may quickly locate information about any element of the design.

Each of the 10 sections of the report contains six or seven parts. The first four (A-D) are those from the evaluation design. Part E discusses the implementation of the evaluation design, including actual sample sizes, any changes or modifications which were made, and general procedural descriptions. Part F includes the findings of that section of the design -- essentially the response to the question of interest

which was posed. Additional or unanticipated findings relative to that design section may be included. If considered appropriate, a final part, Technical Attachment (Part G), was prepared. These attachments provide more detail than is of interest to the casual reader -- e.g., computational formulae or complex methodological procedures.

An outline of each report section would contain these parts:

A. Evaluation Question of Interest	Developed prior to the evaluation.
B. Instrumentation	
C. Design Configuration	
D. Data Analysis Model	
E. Design Implementation	Prepared after the evaluation.
F. Evaluation Findings	
G. Technical Attachment (optional)	

The Evaluation Findings part generally contains tabular data presentations in addition to a narrative discussion of the findings.

Following section 10 is a brief summary of major findings and a series of recommendations.

SECTION 1

ACADEMIC ACHIEVEMENT

A. Evaluation Question of Interest

Do high school students in each of two cohort samples (see Design Configuration), who have been diagnosed as learning disabled and who are exposed to one or more Project Echo instructional sequences in each of five Texas secondary schools, meet the following expected outcomes:

a. 90 percent of the students will demonstrate a grade equivalent gain in one or more of the following academic subjects -- language arts, science, and mathematics -- at a rate of 0.8 grade equivalents per year?

b. 75 percent of the students will demonstrate a grade equivalent gain in one or more of the three subject areas at a rate of 1.0 grade equivalents per year?

c. 25 percent of the students will demonstrate a grade equivalent gain in one or more of the three subject areas at a rate of 1.2 grade equivalents per year?

B. Instrumentation

Stanford Achievement Test Battery (SATB) -- A comprehensive academic achievement battery consisting of 10 subscales in four general areas -- language arts, mathematics, science, and social studies. Subscale scores may be expressed as grade equivalents.

Students will be administered the SATB appropriate to their reading comprehension level as determined during the screening and appraisal process. The 1964 edition-Form W or the equivalent 1974 edition-Form A may be administered.

C. Design Configuration

For each of two cohorts within each of five Project Echo test sites:

$$I : O \left| \begin{matrix} X_L \\ X_M \\ X_S \end{matrix} \right| O$$

where:

I = identification as a Project Echo target student;

O = administration of the SATB; and

X_i = exposure (X) to one or more instructional sequences (i) designated by subscript L for language arts, M for mathematics, and/or S for science.

Samples: Cohort 1 consists of 16-year-old students who were identified as LD during the spring of 1975. Cohort 2 consists of 15-year-old students who may be identified as LD in the Fall of 1975 prior to instructional exposure. Each cohort is anticipated to consist of approximately 50 students in each of five test sites -- a total of approximately 500 students.

D. Data Analysis Model

The project criterion will be considered to be achieved if each of the conditions specified in evaluation question of interest #1 are met. The replication criterion will be considered to be achieved if the following SATB results from the pilot test site are duplicated: the following percentages of pupils demonstrate an average grade equivalent (GE) gain at the rate of 1.0 GE per year.

Language Arts - 51.0%

Mathematics - 42.3%

Science - 51.4%

E. Design Implementation

Project Echo was implemented in five test sites in 1975-76. The size of both student Cohorts was smaller than anticipated. Two sites did not fully implement the program with 16-year-old students. The number of students by site and Cohort who were exposed to one or more Project Echo instructional sequences (Language Arts, Mathematics, and/or Science) and who received both administrations of the Stanford Achievement Test were:

Site	N-Cohort 1	N-Cohort 2
Galveston	0	40
Greenville	12	14
Laredo	0	36
Plano	29	9
W. Central Tex. Educa. Co-op.	19	32
TOTAL	60	151

Not all students completed all subtests of the SATB. Students with incomplete subtests were deleted from analyses involving those subtests; therefore some reported sample sizes may be less than indicated in the table above.

Additional information may be found in Technical Attachment 1.

F. Evaluation Findings

Cohort 1 students (16-year-olds) achieved two of the three achievement gain objectives. The objective not met, that "...90 percent of the students will demonstrate a grade equivalent gain in one or more of the following academic subjects -- language arts, science, and mathematics -- at a rate of 0.8 grade equivalents per year" was very nearly achieved, as 88.33% of the 16-year-olds demonstrated that rate of gain in at least one subject area. The remaining objectives were easily achieved. See Table 2.

A finding beyond the minimum achievement gain criteria was that 30.00% of the Cohort 1 students exceeded the expected achievement gain rate in all three of the tested subject areas. An additional 31.67% demonstrated gains at a rate of 1.0 G.E. or greater per year in two of the three subject areas addressed by the Echo materials. See Table 3.

Cohort 2 students (15-year-olds) exceeded all three achievement gain objectives: 90.07% had G.E. gain rates of 0.8 G.E. per year in one or more

subject areas; 89.40% exceeded a 1.0 G.E. per year rate; and 84.10% surpassed 1.2 G.E. per year in at least one area. See Table 2.

Beyond these findings, it is noted that 16.56% of the 15-year-olds made gains at a rate of 1.0 G.E. or greater in all three areas -- Language Arts, Mathematics, and Science. An additional 41.72% exceeded that rate in at least two of the tested subject areas. See Table 3.

In spite of these positive findings, Echo students in both Cohorts did not equal the performance gains of those students in the original test site (Corsicana) for the project materials. The percentage of Cohort 1 students with a 1.0 G.E. or greater gain in Science (50.88%) came close to duplicating the 51.4% replication criterion, which was based on the performance of 15-year-old Corsicana students in 1972-73. All other percentages fell short of the replication criteria. See Table 4.

TABLE 2

NUMBER AND PERCENTAGE OF TARGET STUDENTS EXCEEDING STATED GRADE EQUIVALENT GAIN OBJECTIVES ON THE STANFORD ACHIEVEMENT TEST IN ONE OR MORE OF THREE SUBJECT AREAS

Cohort 1	16-Year-Olds Exceeding G.E. Gain Criterion	
Rate of G.E. Gain	Number	Percent (of 60)
Greater than 0.8 G.E./Year	53	88.33
Greater than 1.0 G.E./Year	53	88.33
Greater than 1.2 G.E./Year	52	86.67
Cohort 2	15-Year-Olds Exceeding G.E. Gain Criterion	
Rate of G.E. Gain	Number	Percent (of 151)
Greater than 0.8	136	90.07
Greater than 1.0 G.E./Year	135	89.40
Greater than 1.2 G.E./Year	127	84.10

NOTE: Numbers and percentages reported are cumulative and therefore do not total to 100%.

TABLE 3

NUMBER AND PERCENTAGE OF TARGET STUDENTS EXCEEDING EXPECTED GRADE EQUIVALENT GAINS ON THE STANFORD ACHIEVEMENT TEST

Cohort 1	16-Year-Olds Exceeding G.E. Gain Expectation[c]	
	Number	Percent (of 60)
All Three Subject Areas[a]	18	30.00
Two of Three Subject Areas	19	31.67
One of Three Subject Areas	16	26.67
One or More Subject Areas[b]	53	88.33
Cohort 2	**15-Year-Olds Exceeding G.E. Gain Expectation[c]**	
	Number	Percent (of 151)
All Three Subject Areas[a]	25	16.56
Two of Three Subject Areas	63	41.72
One of Three Subject Areas	50	33.11
One or More Subject Areas[b]	135	89.40

NOTES:

[a] The three subject areas addressed by the Echo curriculum and tested by the Stanford are Language Arts, Mathematics, and Science.

[b] Performance criterion was that 75% of students would exceed G.E. gain expectation in one or more subject areas.

[c] Expected grade equivalent gain is at the rate of 1.0 grade equivalents per year.

TABLE 4

PERCENTAGE OF TARGET PUPILS DEMONSTRATING AN AVERAGE GRADE EQUIVALENT GAIN AT THE RATE OF 1.0 G.E./YEAR IN PROJECT ECHO SUBJECT AREAS

Subject Area	Percent with 1.0 G.E./Year Gain Rate		Replication Criterion
	15-Year-Olds	16-Year-Olds	
Language Arts	33.66 %	33.03 %	51.0 %
Mathematics	34.54 %	37.36 %	42.3 %
Science	32.88 %	50.88 %	51.4 %

SECTION 2

STUDENT ATTENDANCE

A. Question of Interest

Do high school students who are exposed to Project Echo in each of five Texas secondary schools meet the following expected outcomes:

a. 90 percent of the students will increase their rate of school attendance by 6% over their previous three-year attendance history?

b. 75 percent of the students will increase their rate of school attendance by 10% over their previous three-year attendance history?

c. Group mean attendance rate of target students will be 6% higher than the mean attendance rate of nontarget students in the same schools during the implementation period?

d. Group mean attendance rate of target students will be 6% higher than the mean attendance of those students over the previous three years?

B. Instrumentation

Project Echo Student Attendance Forms -- Two forms designed for tabulation of attendance data for students. The first form is for target students; the second for a comparison sample of students. The following data will be provided:

> Attendance records (days present, days enrolled) for each of estimated 250 target students in each of two cohort samples for 72-73, 73-74, 74-75, and 75-76. Same data for all nontarget comparison student samples in each of the five schools.

C. Design Configuration

For each of two cohorts within each of five Project Echo test sites:

Target students: I O

Nontarget sample: O

where:

I = identification as a Project Echo target student; and

O = collection of specified attendance data.

Samples: Target students consist of the Cohorts 1 and 2 samples identified above. The nontarget sample consists of all other students of the same age groups in each of the five test schools.

D. Data Analysis Model

The project criterion will be considered to be achieved if each of the conditions specified in evaluation question of interest #2 are met. The replication criterion will be considered met if target student absenteeism decreases by 6% over their past three-year attendance record.

E. Design Implementation

In each of the five Project Echo test sites, attendance information was gathered from school attendance records and transferred to the Project Echo Student Attendance Form (see Attachment 5). To provide the data needed for analyses, the form requested (1) total days present, (2) total days absent, and (3) total days enrolled for each Echo student and for a comparison group of students -- those of the same age as Echo students but not identified as learning disabled. With the exception of Galveston where the comparison group was randomly sampled from among non-Echo students (because of the large student population), the comparison groups consisted of all non-Echo students enrolled in each test school. Complete attendance data were collected on the following numbers of students.

Site	N-Cohort 1	N-Cohort 2	N-Comparison
Galveston	34	47	181
Greenville	8	15	244
Laredo	0	24	94
Plano	21	19	537
W. Central Tex. Educa. Co-op.	42	26	644
TOTAL	105	131	1700

Data were collected on the 1975-76 16-year-olds by school year from 1972-73, and from 1973-74 for the 15-year-olds. Students who transferred into the test schools during the baseline period were deleted from computation for those years when not enrolled.

Computational formulas are provided in Attachment 2.

F. Evaluation Findings

At no test site was the objective that 90% of the Echo students would increase their rate of school attendance by 6% over their prior attendance history achieved.

The objective that 75% of the target students would increase their attendance by 10% over their prior record was achieved by two Echo student groups -- the Cohort 1 group in Plano (80.95%) and Laredo Cohort 2 students (83.33%). Across all sites, 69.52% of the 16-year-olds and 60.31% of the 15-year-olds met or exceeded this objectve. See Table 5.

Two Echo student groups had attendance rates in 1975-76 which exceeded that of non-Echo comparison students in the same schools. Greenville Cohort 1 students were present for 94.13% of the total days enrolled while non-Echo students in Greenville achieved a 93.32% attendance rate. In Galveston, the Cohort 2 group exceeded the comparison sample in attendance by 94.78% to 92.85%. See Table 6. Using the % change formula (Attachment 2), the Greenville and Galveston Echo groups demonstrated, respectively, 12.13% and 26.99% fewer absences than did their respective comparison groups. See Table 7.

Galveston 15-year-old target students in 1975-76 equaled their attendance rate of the previous 2-year pre-Echo period (94.78% attendance), but no Echo student group improved their mean attendance rate. See Table 6.

The stated replication criterion, based on the target group attendance improvement experienced in Corsicana in 1972-73, was not achieved by any 75-76 Echo group. Across sites, target student attendance rates decreased for both Cohort 1 (93.86% to 92.48%) and Cohort 2 (94.28% to 92.92%).

TABLE 5

PERCENTAGE OF ECHO STUDENTS IMPROVING ATTENDANCE IN 1975-76
OVER PREVIOUS ATTENDANCE RECORDS

Cohort 1	16-Year-Olds Exceeding Attendance Objective[a]	
Test Site	Number	Percent
Galveston	24 of 34	70.59
Greenville	4 of 8	50.00
Plano	17 of 21	80.95[b]
West Central Texas Educational Cooperative	28 of 42	66.67
TOTAL	73 of 105	69.52

Cohort 2	15-Year-Olds Exceeding Attendance Objective[a]	
Test Site	Number	Percent
Galveston	24 of 47	51.06
Greenville	11 of 15	73.33
Laredo	20 of 24	83.33[b]
Plano	10 of 19	52.63
West Central Texas Educational Cooperative	14 of 26	53.85
TOTAL	79 of 131	60.31

NOTES:

[a] 10% decrease in absenteeism over previous record.

[b] criterion achieved

TABLE 6

MEAN PERCENT ATTENDANCE BY PROJECT GROUP AND SITE

Test Site	Cohort 1		Cohort 2		Non-Echo Comparison Group
	1975-76	1972-75	1975-76	1973-75	
Galveston	92.72	93.41	94.78	94.78	92.85
Greenville	94.13	96.70	90.76	93.31	93.32
Laredo	--	--	90.12	94.56	90.74
Plano	92.26	95.12	94.49	95.51	94.52
West Central Texas Educational Cooperative	92.08	93.06	92.26	92.79	94.36
TOTAL	92.48	93.86	92.92	94.28	93.90

TABLE 7

PERCENTAGE DIFFERENCE IN ECHO STUDENT ABSENTEEISM RATE COMPARED TO ABSENTEEISM RATES OF TWO REFERENCE GROUPS

	Reference Groups	
	Cohort 1 Prior to Echo, 1972-75	Non-Echo Comparison Group, 1975-76
Cohort 1		
Galveston	10.47	1.82
Greenville	77.88	-12.13*
Plano	58.61	41.24
West Central Texas Educational Cooperative	14.12	40.43
TOTAL	22.48	23.28

	Reference Groups	
	Cohort 2 Prior to Echo, 1973-75	Non-Echo Comparison Group, 1975-76
Cohort 2		
Galveston	0.00	-26.99*
Greenville	38.12	38.32
Laredo	81.62	6.70
Plano	22.72	0.55
West Central Texas Educational Cooperative	7.35	37.23
TOTAL	23.78	16.07

NOTES: Negative percentages indicate Echo student absenteeism rate was less than that of Reference Group.

Asterisk (*) indicates achievement of evaluation criterion.

SECTION 3

STUDENT DROPOUTS

A. Question of Interest

Do high school students who are exposed to Project Echo in each of five Texas secondary schools meet the following expected outcome:

> The rate of dropouts among the target students will be 2% less than the dropout rate among students of the same age groups in each school over the previous two years?

B. Instrumentation

Project Echo Dropout Data-Gathering Form -- The following data are provided: In each of five schools for the 75-76 school year, number of target-group dropouts, number of target-group enrollees, number of non-target dropouts, and number of nontarget enrollees; and in same schools for 72-73, 73-74, and 74-75, number of dropouts and number of enrollees in the same age range as Project Echo target students.

C. Design Configuration

For each of two cohorts within each of five Project Echo test sites:

Target students:	I	O
Nontarget sample:		O

where:

I = identification as a Project Echo target student; and

O = collection of specified dropout data.

Samples: Target students consist of the Cohorts 1 and 2 samples identified above. The nontarget sample consists of all other students of the same age groups in each of the five test schools.

D. Data Analysis Model

The project and replication criteria will be met by achievement of a 2% decrease in dropout rate as specified in evaluation question of interest #3.

E. Design Implementation

This portion of the Project Echo evaluation design was not fully implemented as originally proposed. An unanticipated problem encountered was that available school records in several instances did not permit distinguishing, with confidence in the data, actual school dropouts from students transferring to other schools. This was particularly common with "older" records. Lack of uniform follow-up procedures among the sites when a student left school for unknown reasons resulted in some data of questionable validity. Findings which are reported were based on verifiable enrollment and dropout figures for 15-year-olds at four of the Echo test sites. Data which were employed included total populations for 1973-74 and 1974-75 and both Echo and non-Echo groups for 1975-76. Dropout data on Laredo 15-year-olds prior to 1974-75 were lost in a 1974 school fire.

Sufficient data were available to perform dropout comparisons against two reference groups rather than one as originally proposed. These reference groups were (1) all 15-year-olds in each site over the previous 2-year period, 1973-75, and (2) non-Echo 15-year-olds in each site during the implementation period, 1975-76.

For each student sample, the percentage of dropouts from the total enrollment was computed. In addition, the percentage difference in dropout rates between the Echo group and the non-Echo comparison groups were determined. Computational formulas are provided in Attachment 3.

F. Evaluation Findings

Fifteen-year-old Project Echo students dropped out of school less frequently than did either (1) all 15-year-old students enrolled in project schools during the 2 years prior to Echo implementation, or (2) non-Echo 15-year-olds in project schools during the implementation

period. Across sites, eight of 159 Echo students (5.03%) left school and did not enroll elsewhere during 1975-76. This dropout percentage compares favorably to the dropout percentages of the two reference groups mentioned above, which were 6.35% and 6.05%, respectively. See Table 8.

When the percentage difference in Echo student dropout rate was compared to the dropout rates of the two non-Echo groups, the Echo group, as a whole, demonstrated a dropout rate 20.79% less than the dropout percentage of all 15-year-olds, 1973-75 sample, and 16.86% less than the dropout percentage of non-Echo students during 1975-76. Most of this difference was accounted for by the Echo group in Galveston, none of whom dropped out of school during the implementation period. See Table 9.

TABLE 8

STUDENT DROPOUT DATA SUMMARY BY GROUP AND SITE

	Echo 15-Yr.-Olds, 1975-76	Non-Echo 15-Yr.-Olds, 1975-76	All 15-Yr.-Olds, 1973-75 Average
Galveston			
Enrollment	48	1023	992
No. Dropouts	0	64	58.5
% Dropouts	0.00	6.26	5.90
Laredo			
Enrollment	43	207	544
No. Dropouts	5	25	57
% Dropouts	11.63	12.08	10.48
Plano			
Enrollment	35	466	242.5
No. Dropouts	2	26	14
% Dropouts	5.71	5.58	5.77
West Texas Central Educational Cooperative			
Enrollment	33	403	410.5
No. Dropouts	1	12	9.5
% Dropouts	3.03	2.98	2.31
TOTAL			
Enrollment	159	2099	2189
No. Dropouts	8	127	139
% Dropouts	5.03	6.05	6.35

TABLE 9

PERCENTAGE DIFFERENCE IN ECHO STUDENT DROPOUT RATE COMPARED TO DROPOUT RATES OF TWO NON-ECHO REFERENCE GROUPS

	Reference Groups	
	Non-Echo 15-Yr.-Olds, 1975-76	All 15-Yr.-Olds, 1973-75
ECHO Groups		
Galveston	-100.00*	-100.00*
Laredo	-5.44*	+10.97
Plano	+2.33	-1.04
West Central Texas Educational Cooperative	+1.68	+31.17
TOTAL	-16.86*	-20.79*

NOTES: Negative percentages indicate Echo student dropout rate was less than that of Comparison students.

Asterisk (*) indicates achievement of evaluation criterion.

SECTION 4

PARENT INVOLVEMENT

A. Question of Interest

Do 80 percent of the parents of identified Project Echo target students in each of five schools attend 80% of the project's scheduled parent involvement activities during the project implementation period?

B. Instrumentation

Parent Involvement Activity Register -- The following data are provided: For each of five schools, number of parents of target students, number of planned parent involvement activities, and number of parents of target students in attendance at each activity.

C. Design Configuration

For each Parent Involvement Activity at each test site:

X O

where:

X = planned activity; and

O = collection of attendance information.

For this section of the design, "parent attendance" is defined as the physical presence of one or more adult members of the household in which a target student resides.

D. Data Analysis Model

The project criterion will be met if 80 percent of the target students' parents attend 80 percent of planned Parent Involvement activities. No replication criterion will be applied.

E. Design Implementation

Evaluation question of interest #4 was predicated on the assumption that

each test site would conduct, during the pre-implementation period (when screening and appraisal was conducted) and during the implementation period (when Echo materials were used with identified target students), a series of group activities (meetings, information session, etc.) for parents of those students identified as learning disabled and enrolled in the project. The anticipated series of group activities did not occur at each site. The general pattern for conducting parent involvement activities was to conduct one general information session for parents early in the project and followup with periodic individual parent contacts during the school year. This modification of the parent involvement implementation plan was suggested and approved in a meeting of Site Coordinators and the Project Echo Advisory Committee (August 12, 1975). The rationale for the change was that individual parent contacts would provide a more effective approach to communication with parents of target students than would large group sessions. Only Laredo and Plano conducted more than one general session; Galveston used only individual contacts. Because of the modified approach to parent involvement activities, this portion of the evaluation design could not be implemented as originally proposed. Other data, which were available, do provide indicators regarding the effects of parent involvement activities. The data are discussed in the following section.

F. Evaluation Findings

All Project Echo test sites reported contacts with at least one of the parents of every identified Project Echo target student in 1975-76. At the minimum, these parents were provided a description of the project and its goals, information about learning disabilities, and specific feedback regarding the process deficits identified in their child during the extensive pre-implementation screening and appraisal process. Most

parents were provided information about the academic progress of their child during the course of the implementation period. Most contacts between Echo staff members and parents were by telephone (approximately one-third of which were estimated by Site Coordinators to have been parent-initiated calls). Individual parent conferences were the next most frequent mode of contact -- followed by parent attendance at a planned group meeting.

Four sites had at least one general meeting for all parents of Project Echo students. Attendance figures were: Greenville, 34 parents attended one meeting; Laredo, an average of 27.2 parents attended five meetings; Plano, an average of 17.2 parents attended six meetings; and West Central Texas Educational Cooperative, 39 parents attended one meeting. In Laredo and Plano, where multiple group meetings were conducted, the largest parent attendance at any one meeting was 53 and 50, respectively.

SECTION 5

COMMUNITY INFORMATION DISSEMINATION

A. Question of Interest

Do representatives of business firms and civic organizations in each of the five Texas communities in which Project Echo is implemented attend one of two project information dissemination conferences conducted by the local project staff?

B. Instrumentation

Project Echo Dissemination Conference Register -- The following data are provided: Records of the occurrence and attendance at information dissemination conferences conducted for representatives of business and civic organizations in five communities.

C. Design Configuration

For each Dissemination Conference at each test site:

X O

where:

X = Dissemination Conference; and

O = collection of attendance information.

D. Data Analysis Model

The project and replication criteria will be achieved if two Dissemination Conferences are conducted.

E. Design Implementation

Project Echo information dissemination conferences were conducted at three of the five test sites. In Galveston and Plano, local school administrators preferred not to conduct such conferences because of uncertainty about the district being able to continue support of the project after the 1975-76 school year.

F. Evaluation Findings

The project and replication criteria were achieved at the three Echo test sites which elected to conduct information dissemination conferences for representatives of local business firms and civic organizations. In these sites, a total of 33 sessions were conducted in which 1,158 individuals were provided information about learning disabilities, Project Echo, and the local school district's participation in the project. See Table 10.

In addition to the provision of Project Echo information via these conferences, the local newspapers at two sites published feature articles regarding Project Echo for their readers.

TABLE 10

OCCURRENCE OF AND ATTENDANCE AT INFORMATION DISSEMINATION CONFERENCES CONDUCTED AT THREE PROJECT ECHO TEST SITES

Test Site	Number of Sessions	Total Attendance	Average Attendance
Greenville	8	313	39.12
Laredo	10	252	25.20
West Central Texas Educational Cooperative	15	593	39.53
TOTAL	33	1,158	35.09

SECTION 6

TEACHER TRAINING

A. Question of Interest

Do classroom teachers who implement Project Echo instructional Minimodules in five schools demonstrate attainment of the concepts presented in the Process Orientation Modules?

B. Instrumentation

Process Orientation Module Criterion-Referenced Measures -- instruments designed to determine attainment of concepts presented in the teacher orientation to Project Echo.

C. Design Configuration

Within each project test site:

X O

where:

X = exposure to process orientation modules; and

O = assessment of concept attainment.

The sample consists of classroom teachers of identified target students who use Language Arts, Mathematics, and/or Science Minimodules in five Texas schools.

D. Data Analysis Model

The project criterion will be met if project teachers demonstrate attainment of an average of 80 percent of module concepts presented. There is no replication criterion as the process orientation modules were not employed in the pilot test site.

E. Design Implementation

At none of the Project Echo test sites were the Process Orientation Modules used with Echo teachers as they were designed to be used. The

most prevalent reason was the amount of time required for complete implementation.

During the spring of 1975, prior to the use of Echo materials in the classroom, all teachers who would be using the materials were exposed to portions of the training modules. Since the complete modules were not used, the Project Training Coordinator elected not to administer the Criterion-Referenced Measures as originally planned.

F. Evaluation Findings

As previously indicated, the Process Orientation Module Criterion-Referenced Measures were not administered at any test site. No data are available from other sources to indicate teacher attainment of concepts presented in the modules.

SECTION 7

PROJECT ECHO DISSEMINATION

A. Question of Interest

Do administrators and/or supervisors from the 25 observer schools demonstrate comprehension of information regarding the components and operation of Project Echo as implemented in five schools, which is considered by the Project Director as information useful as input into the decision to adopt the model during 76-77?

B. Instrumentation

These process data will be collected by informal interview with the Project Director.

C. Design Configuration

The interview will be conducted prior to May 31, 1976.

D. Data Analysis Model

Process data will be documented without specific identification of observer schools. Criterion will be achieved if one administrator or supervisor from each observer school is considered by the Project Director to comprehend operation of the Project Echo Model.

E. Design Implementation

To test the dissemination strategy that potential adopters of a complex product (i.e., Project Echo) are more likely to decide to adopt that product if their information about the product is based on personal observation, each of the five Project Echo test sites was asked to identify five other school districts or cooperatives to observe the implementation of the project. The observer schools that were identified by the five Echo sites are indicated in Table 11.

Representatives of observer schools were provided the opportunity

to visit the respective Echo test sites in order to obtain an overview of the project, examine the materials, observe use of Echo products and procedures in a classroom setting, and question local project staff members about the project.

Information regarding this portion of the evaluation was obtained in interviews with the Echo Project Director on May 17 and June 14 and 16, 1976. Supplementary data were obtained via a Site Coordinator Debriefing instrument completed by each of the five Site Coordinators in June 1976.

F. Evaluation Findings

At least one representative from each observer school visited an Echo test site at least once between February 1976 and May 1976. Many returned for a follow-up observation -- often bringing other persons from their school district.

Most freqently, the observers were either Directors of Special Education for their district or high school principals. Other observers included School Superintendents, School Board members, Curriculum Directors, Secondary Teachers, and Educational Diagnosticians.

In a series of interviews near the end of the project, the Echo Project Director expressed the feeling that 80-90% of the observer school representatives had obtained sufficient understanding of the project on which to base an adoption-decision. The remaining observers were considered to have a good understanding of the instructional materials, but did not fully comprehend the purposes or operation of other Echo components -- e.g., the instructional management system and the screening and appraisal process. Written comments of the Site Coordinators in response to items in a Site Coordinator Debriefing instrument verify these observations.

TABLE 11

OBSERVER SCHOOL DISTRICTS SELECTED BY ECHO TEST SITES

Observers at Galveston ISD:[a]

- Alvin ISD
- Beaumont ISD
- Goose Creek ISD (Baytown)
- La Marque ISD
- Spring Branch ISD (Houston)
- Texas City ISD

Observers at Greenville ISD:

- Commerce ISD
- Denison ISD
- Irving ISD
- Red River Cooperative (Clarksville)
- Wylie ISD

Observers at Laredo ISD:

- Brownsville ISD
- Edinburg ISD
- Mercedes ISD
- Weslaco ISD
- Zapata ISD

Observers at Plano ISD:

- Carrolton-Farmers Branch ISD
- Denton ISD
- Garland ISD
- Richardson ISD
- Sherman ISD

Observers at West Central Texas Educational Cooperative

- Abilene ISD
- Divide ISD (Nolan)[b]
- Hermleigh ISD[b]
- Lorraine ISD[b]
- Snyder ISD

NOTES:

[a]Galveston ISD identified six observer school districts.

[b]Members of the West Central Texas Educational Cooperative.

SECTION 8

ACTIVITY AUDIT

A. Question of Interest

Does an evaluation audit of the project implementation (intervention and replication strategies) in five schools indicate that the following activities and processes were accomplished as anticipated:

a. The pupil screening and identification process?

b. Use of instructional support materials with identified L/LD students?

c. Observation of the operation of the L/LD model by representatives of the cluster associate schools?

d. The adoption-decision process in the observer schools?

e. Development of a statewide plan for dissemination of information about the model to all Plan A schools?

B. Instrumentation

These audit data will be collected by informal interviews with specific personnel associated with Project Echo: the Coordinator at each of the five test sites (questions a-c), the identified administrator or supervisor from each of 25 cluster associate observer schools (question d), and the Project Director (question e). The interviews may be conducted during site visits or by telephone.

C. Design Configuration

The data collection schedule may vary in different sites. All data will be collected prior to May 31, 1976.

D. Data Analysis Model

Occurence of each of the processes identified in evaluation question of interest #8 will be considered as attainment of criteria.

E. Design Implementation

Project Echo, in addition to providing a trial of supplementary instructional materials designed for use with secondary learning disabled students, afforded an opportunity to implement several non-instructional intervention and replication strategies. This portion of the project evaluation provides an audit of several activities which were planned to occur in conjunction with the project.

Various audit data were collected in meetings and during on-site and/or telephone interviews with a large number of project participants, including the Project Director, members of the Project Echo statewide Advisory Committee, all Site Coordinators and Echo teachers and aides, four of the five superintendents at the Echo test sites, all test site principals and Special Education directors, and samples of Echo target students and observer school representatives. Written feedback from the Site Coordinators was available via a debriefing instrument which the Coordinators completed in June 1976.

F. Evaluation Findings

Screening and Appraisal. In all five Echo test sites, a screening and appraisal process was conducted to identify groups of learning disabled students with whom the Echo instruction materials would be used. Cohort 1 students (16-year-olds in 1975-76) were identified during the spring semester of 1974-75 -- at which time they were 15-years-old. The Cohort 2 groups (15-year-olds in 1975-76) went through the screening and appraisal process early in the 1975-76 school year.

The process as designed and implemented was a multistage effort which sought to identify those students who fell within guidelines specified by the Texas Education Agency to define a learning disabled student (Administra-

tive Guide and Handbook to Special Education, Bulletin 711). The first stage of the process, screening, involved analysis of data on all 15-year-olds in each test school to identify those students with possible learning deficits. This identified subgroup then received in-depth appraisal(s) in the deficit area(s) indicated by the screening. Those whose learning deficits were verified by the appraisal provided the target student groups for Echo intervention.

The screening and appraisal process, as implemented to identify Cohort 1 students, was quite elaborate (See Attachment 4). An attempt was made to make operational a standardized procedure for identification of target students. Primarily because of the time required for complete implementation and resulting scheduling conflicts, the screening and appraisal process was streamlined before the Cohort 2 groups were identified. This was generally accomplished by use of some assessment information already contained in school records (rather than administering additional instruments) and through a teacher referral process.

Use of Instructional Materials. The Language Arts and Mathematics minimodules were used more extensively with target students than were the Science minimodules. Reports from Echo teachers and Site Coordinators indicate that the Language Arts minimodules are more easily integrated into the normal Language Arts curriculum presented to ninth and tenth grade students. Several target students were enrolled in Algebra classes, and the Mathematics minimodules (designed to supplement a pre-algebra general math program) were of limited use to those students. The Science minimodules were designed for use with students in Physical Science curriculum; however almost half of the target students were enrolled in Biology and did not

use any of the Science minimodules.

The Echo minimodules were more frequently used with Cohort 2 students (15-year-olds) than with the 16-year-old Cohort 1 students. Many of the older students were enrolled in classes for which minimodule content was not directly applicable. In Laredo, no Cohort 1 students were exposed to the Echo minimodules during 1975-76. In that district, ninth and tenth grade students attend classes on different campuses. Resources were not available to implement Echo at both locations, so the decision was made to focus all efforts on the 15-year-olds, the age group for whom the materials were originally designed.

The differential extent of use of the minimodules across the five test sites is difficult to assess. The subjective impressions of the Project Director and Project Evaluator, who visited all sites on multiple occasions, were that the greatest extent of use was in Laredo and the least in Plano.

Echo minimodules were used in a variety of instructional situations -- the most prevalent pattern was use with a small group of students in a mainstream classroom with the Echo teacher assisting the mainstream teacher. On occasion, the entire class -- both Echo and non-Echo students -- used the materials. Some individual minimodule use in a resource room setting occurred -- particularly in Colorado City and Galveston.

Observation by Cluster Associates. As indicated in a previous section (pages 47-48) representatives of observer school districts (Cluster Associates) did investigate Project Echo by observing project operations in the test schools. Site Coordinators provided several means by which observers could obtain information about the project. These included invitations to observe the materials in classroom use, to attend training sessions

provided to test site mainstream teachers, to view a slide-tape Project Echo overview, to review Echo products, and to participate in question-and-answer sessions with Echo teachers. Two sites prepared periodic newsletters and descriptive correspondence for their observers. Presentations were made at observer school sites by two Echo Site Coordinators.

Adoption-Decision Process. As of June 1976, some consideration regarding the possible 1976-77 adoption of all or part of Project Echo had occurred in all observer districts. Of the 26 observer groups, 12 had indicated a decision had been reached -- 11 in favor of adoption and one rejection. The remaining 14 were undecided at that time or had mixed feelings about various components of the project. General reactions of observers were strongly favorable views regarding the instructional mini-modules and parent involvement effects, with least favorable reaction regarding the Project Echo screening and appraisal process.

Statewide Dissemination Plan. In June 1976, a proposal seeking funds for Project Echo dissemination activities was prepared and submitted to the Bureau of Education for the Handicapped by Education Service Center, Region XII, in Waco. The disposition of this proposal is not currently known.

Sufficient quantities of the final revision of the Echo instructional materials are being prepared to provide copies to all Echo test schools, the observer schools which desire them, and all 20 of the state's regional Education Service Centers. Materials in the Service Centers will be available to school districts on a loan basis.

No coordinated plan for creating Project Echo awareness among potential adopters has been implemented; however, several independent efforts have occurred -- e.g., a presentation at the convention of the Texas Council

for Exceptional Children (Houston, July 1976) and a feature article in centerfoLD, a monthly publication of the National Learning Disabilities Assistance Project.

SECTION 9

INSTRUCTIONAL CONTENT MASTERY

A. Question of Interest

For each of 30 Project Echo instructional minimodules, do 80 percent of target students, after exposure to the project intervention, demonstrate mastery of 80% of the major instructional objectives addressed by the minimodules?

B. Instrumentation

Minimodule Mastery Tests -- a series of 30 criterion-referenced measures, each designed to test student mastery of the major instructional objectives of one of the 30 Project Echo minimodules. The series contains 10 language arts tests, 10 mathematics tests, and 10 science tests.

C. Design Configuration

For each target student:

$X_1O_1, X_2O_2, \ldots, X_nO_n$

where:

X = student exposure to one of a series of instructional minimodules; and

O = assessment of objective master.

Sample: Student samples consist of all identified target students who are exposed to one or more Project Echo minimodules.

D. Data Analysis Model

Correct responses of 80% of the target students to 80% of the items of each Mastery Test will be considered indicative of mastery of the major instructional objectives of that minimodule. In addition to the basic analysis model, mastery test findings will be analyzed by student age group, sex, ethnicity, and test site to explore and document any possible mastery

differences within these target student subgroups.

E. Design Implementation

The 30 Project Echo minimodules -- 10 each in the areas of Language Arts, Mathematics, and Science -- were made available in five test sites for supplementary instructional use with identified learning disabled students. Each of the original minimodules was designed with an accompanying criterion-referenced Mastery Test for post-instructional administration to assess student attainment of the major instructional concepts presented. Three of the 30 test instruments were judged by external reviewers to be inadequate measures of mastery and were deleted from the version of the materials tested in 1975-76. Data from the remaining 27 instruments were collected to provide indicators of the effectiveness of the minimodules in transmitting instructional content. The primary purpose of the data collection was to provide formative information for a final revision of the minimodules prior to the end of the project's funding period. The primary analysis procedure was determination of the proportion of target students responding correctly to each item of each Mastery Test. In that manner, concepts not attained after instruction (i.e., items missed by a large percentage of students) could be identified and the corresponding content in the minimodule strengthened or clarified during revision.

F. Evaluation Findings

Analysis of the Echo Mastery Test data was quite involved. Over 20,000 pieces of data were received. Prior to summarizing the general findings, two major cautions are advised:

- Because final revision of the minimodules began prior to the end of the implementation period, analyses of Mastery Test results often were conducted based on data available at the time the revision of a specific minimodule began. Mastery tests subsequently received from that minimodule were not included.

- In many instances the minimodules were used in mainstream classrooms with both Echo and non-Echo students. When Mastery Tests were administered to both groups, teachers were instructed to return both sets for analysis (to provide an indication of utility of the materials for a group other than the one for which the materials were designed). Some Mastery Tests were received for which group designation (Echo or non-Echo) could not be distinguished. These data were omitted from analysis.

Across sites, Mastery Test results were greatly divergent. A minimodule which had positive effects in one site frequently fared less well in another location. Minimodules indicated to be most successful were: Language Arts IV, V, VII, and X; Mathematics I, II, IV, and V; and Science III. (See Tables 12-14, in the following section).

As previously indicated, three minimodules did not contain Mastery Tests; these were Science V, IX, and X. Data from three other minimodules were not analyzed because of the samll number of students (less than 15) who were exposed to the minimodule and who completed the Mastery Test. The deleted minimodules were Mathematics IX and Science II and IV.

Trends in the data were not strong enough to suggest any significant mastery differences as a function of student age, sex, or ethnicity. Performance differences on specific minimodules were frequently noted between sites, but no strong patterns were located when data were examined across minimodules.

Consideration of Mastery Test findings in conjunction with data obtained via the Teacher Checklist (reported in the following section) reveals that the most effective minimodules tend to be more positively rated by teachers and to have received more pupil exposure time (mean exposures of 4.38 hours per student vs. 3.83 hours per student).

SECTION 10

TEACHER PERCEPTION

A. Question of Interest

Following classroom use of each instructional minimodule with at least five students, do 80 percent of Project Echo teachers report that:

a. a majority of the students demonstrated interest in the minimodule content?

b. instructional time requirements were not excessive?

c. preparation time requirements were not excessive?

d. the quantity of materials and media provided was sufficient?

e. the quality of materials and media provided was appropriate?

f. the mastery test provided a valid indication of student learning?

g. the instructional objectives of the minimodule were appropriate to the educational needs of most of the students?

h. the vocabulary and reading level of student books was at an appropriate level for most of the students?

B. Instrumentation

Teacher Checklist -- a short form, employing a checklist format, designed to obtain teacher reports and perceptions regarding the use of Project Echo minimodules. Provision is made to allow open-ended teacher comments and suggestions for minimodule improvement. Completion of the checklist is anticipated to require 2-5 minutes for each minimodule used.

C. Design Configuration

For each Project Echo teacher:

$X_1O_1, X_2O_2, \ldots, X_nO_n$

where:

X = use of one of a series of instructional minimodules with five or more target students; and

O = completion of Teacher Checklist.

Sample: Teacher sample consists of all Project Echo classroom (and/or resource room) teachers who use one or more minimodules with five or more target students.

D. Data Analysis Model

Affirmative responses of 80 percent of the teachers using each Project Echo minimodule to Teacher Checklist items addressing each area of concern identified in question of interest #10 will be considered as attainment of criteria.

E. Design Implementation

Teachers who used Project Echo minimodules were requested to complete a Teacher Checklist after completing instruction with each minimodule. The forms requested both objective information (e.g., the amount of teacher preparation time required before classroom use) and subjective impressions of the teachers (e.g., perceived quality of minimodule materials). In addition, provision was made for unstructured teacher comments and/or suggestions regarding the minimodule.

As with the collection of mastery data, this portion of the design was implemented primarily to obtain formative information for use in final revision of the minimodules. For this reason, teachers were urged to be critical of the materials so that the minimodule revision team would be provided information about the relative strengths and weaknesses of each minimodule.

Echo materials were often used in mainstream classrooms by non-Echo teachers. Most of these teachers completed a checklist for each minimodule used. These data were separately reported to the revision team for formative

purposes but are not included in this report. Teacher checklist data are likewise not reported on three minimodules which were used with fewer than 15 students each. These are Mathematics IX and Science II and IV.

F. Evaluation Findings

Echo teachers were generally positive in their perceptions of the minimodules. Of the 27 minimodules judged by the teachers, 26 received high marks for the quality of the materials and 21 were considered as using vocabulary at an appropriate level for most of the students. The teachers were less well pleased with the appropriateness of the instructional objectives for the needs of the students. Only 14 of the minimodules had objectives which were considered appropriate by 80% or more of the teachers. Three minimodules -- Language Arts VII and X, and Mathematics IV -- were rated highly on all eight dimensions on which teachers were asked to provide judgments. At the other extreme, the Mathematics VIII minimodule rated highly on only two of the eight dimensions. Specific findings by minimodule and objective are contained in Tables 12, 13, and 14.

Table 15 summarizes teacher perceptions by subject area (across minimodules) regarding each of eight dimensions of concern. Application of the predefined evaluative criteria indicates that the Language Arts and Mathematics minimodules each achieved criteria on six dimensions. Criteria were achieved on three dimensions by the Science minimodules.

Other data from the Teacher Checklists provide several interesting observations. More students were exposed to Mathematics minimodules, but more average instructional time was devoted to Language Arts minimodules. Teachers reported much greater teacher preparation time required for use of the science minimodules. These data are summarized in Table 16.

TABLE 12

ATTAINMENT OF OBJECTIVES - LANGUAGE ARTS MINIMODULES

LANGUAGE ARTS MINIMODULE	Objectives Attained (✓)[a]								
	A	B	C	D	E	F	G	H	I
I. Critical Thinking as Applied to Propaganda-Part I			✓	✓	✓	✓			
II. Critical Thinking as Applied to Propaganda-Part II			✓		✓	✓			
III. Following Directions		✓	✓	✓	✓		✓	✓	✓
IV. Finding the Main Idea in Printed Materials	✓		✓	✓	✓	✓	✓	✓	
V. You and Others	✓		✓	✓	✓	✓	✓	✓	✓
VI. Sentence Patterns			✓	✓	✓	✓			
VII. How to Read a Newspaper	✓	✓	✓	✓	✓	✓	✓	✓	✓
VIII. Friendship: Two Sides of the Coin				✓	✓	✓		✓	✓
IX. Tune-in to Listening			✓	✓	✓	✓	✓	✓	
X. Words and How They Relate to Each Other	✓	✓	✓	✓	✓	✓	✓	✓	✓

[a]Key to Objectives

A - 80% of students will demonstrate mastery of 80% of instructional objectives.

B - 80% of teachers report satisfactory pupil interest in minimodule.

C - 80% of teachers report that instructional time requirements were not excessive.

D - 80% of teachers report that quantity of materials was sufficient.

E - 80% of teachers report that quality of materials was appropriate.

F - 80% of teachers report that mastery test was valid indicator of learning.

G - 80% of teachers report that instructional objectives were appropriate to student needs.

H - 80% of teachers report that vocabulary level of student text was appropriate.

I - 80% of teachers report that reading level of student text was appropriate.

TABLE 13

ATTAINMENT OF OBJECTIVES - MATHEMATICS MINIMODULES

MATHEMATICS MINIMODULE	Objectives Attained (✓)[a]								
	A	B	C	D	E	F	G	H	I
I. Personal Income	✓	✓			✓	✓	✓	✓	✓
II. Buying a Car	✓		✓		✓	✓	✓	✓	✓
III. Car Insurance			✓	✓	✓	✓		✓	✓
IV. The Cost of Operating a Car	✓	✓	✓	✓	✓	✓	✓	✓	✓
V. Car Rental	✓	✓	✓	✓	✓	✓	✓	✓	
VI. The Use of Charts and Graphs - Part I		✓	✓		✓	✓		✓	✓
VII. The Use of Charts and Graphs - Part II		✓	✓	✓	✓	✓		✓	✓
VIII. Credit Financing		✓			✓				
IX. You be the Teacher	(Insufficient data available for analysis due to limited use.)								
X. Auditory Mathematics		✓			✓	✓			

[a] Key to Objectives

A - 80% of students will demonstrate mastery of 80% of instructional objectives.

B - 80% of teachers report satisfactory pupil interest in minimodule.

C - 80% of teachers report that instructional time requirements were not excessive.

D - 80% of teachers report that quantity of materials was sufficient.

E - 80% of teachers report that quality of materials was appropriate.

F - 80% of teachers report that mastery test was valid indicator of learning.

G - 80% of teachers report that instructional objectives were appropriate to student needs.

H - 80% of teachers report that vocabulary level of student text was appropriate.

I - 80% of teachers report that reading level of student text was appropriate.

TABLE 14

ATTAINMENT OF OBJECTIVES - SCIENCE MINIMODULES

SCIENCE MINIMODULE	Objectives Obtained (✓)[a]								
	A	B	C	D	E	F	G	H	I
I. Classification as a Tool of Learning			✓		✓			✓	
II. Metric System - Linear Measurement	(Insufficient data available for analysis due to limited use.)								
III. Metric System - Weight and Volume Measurement	✓	✓			✓	✓	✓	✓	✓
IV. Observations as a Tool of Science	(Insufficient data available for analysis due to limited use.)								
V. Using Problem Solving	b	✓					✓	✓	
VI. Simple Machines as Tools		✓	✓	✓	✓		✓	✓	✓
VII. Simple Machines with Rotary Motion		✓	✓	✓	✓		✓	✓	✓
VIII. Useful Work		✓	✓	✓	✓			✓	
IX. Recognizing Cause-Effect Relationships	b				✓	✓			✓
X. Predicting Outcomes	b				✓			✓	✓

[a] Key to Objectives

A - 80% of students will demonstrate mastery of 80% of instructional objectives.

B - 80% of teachers report satisfactory pupil interest in minimodule.

C - 80% of teachers report that instructional time requirements were not excessive.

D - 80% of teachers report that quantity of materials was sufficient.

E - 80% of teachers report that quality of materials was appropriate.

F - 80% of teachers report that mastery test was valid indicator of learning.

G - 80% of teachers report that instructional objectives were appropriate to student needs.

H - 80% of teachers report that vocabulary level of student text was appropriate.

I - 80% of teachers report that reading level of student text was appropriate.

[b] Minimodule did not contain Mastery Test

TABLE 15

SUMMARY OF TEACHER PERCEPTIONS REGARDING ECHO MINIMODULES

	Echo Minimodule Content Areas		
	Language Arts	Mathematics	Science
Percent[a] of Teachers Reporting:			
1.) Pupil interest perceived as "adequate" or "high"	70.69	83.54[b]	64.71
2.) Instructional time required was "about right" for most students	86.21[b]	80.00[b]	81.25[b]
3.) Quantity of materials included was "about right"	93.33[b]	70.89	56.25
4.) Quality of materials was "adequate" or "excellent"	100.00[b]	93.05[b]	87.50[b]
5.) Mastery test was "adequate" or "excellent"	87.50[b]	93.15[b]	41.18
6.) Instructional objectives at "appropriate" level	84.48[b]	78.95	70.59
7.) Vocabulary level in student text was "appropriate"	81.36[b]	90.79[b]	87.50[b]
8.) Reading level of student text was "appropriate"	78.95	86.84[b]	78.57

NOTES

[a] Reported percentages are averaged across minimodules in each content area.

[b] Criterion achieved.

TABLE 16

COMPARISON OF SELECTED PROJECT ECHO MINIMODULE IMPLEMENTATION VARIABLES BY SUBJECT AREA

Variable	Language Arts	Mathematics	Science
Average number of students exposed to each minimodule	142.9	179.7	141.6
Average pupil instructional time in minutes per minimodule	253	246	155
Average teacher preparation time in minutes per minimodule	69	53	92

SUMMARY AND RECOMMENDATIONS

Overall, the effects of Project Echo intervention on secondary level learning disabled students are considered positive. A beneficial influence on academic achievement in the subject areas addressed by the instructional component was noted. Echo target students dropped out of school during the intervention period at a rate less than would be expected but did not improve their attendance rates as desired.

Two Project Echo components, parent involvement and teacher training, were not fully implemented as proposed, but increased levels of parent-school communication were found at all sites and a majority of the Echo teachers demonstrated the ability to effectively implement the program after having received only portions of the teacher training.

The screening and appraisal process was accomplished -- as proposed, for the identification of Cohort 1 students, and with modifications, for Cohort 2. Scheduling difficulties and excessive time requirements were still noted as negative features of the process.

The effects of the observer school dissemination strategy, which provides project information to a network of preselected potential adopters, is inconclusive at this time.

Project Echo teachers were generally positive in their perceptions regarding the appropriateness of the minimodules for learning disabled students. Teachers who used the Language Arts and Mathematics materials reported more positive feelings than did teachers using the Science mini-modules.

The implementation and evaluation of Project Echo at five new test sites has identified both strengths and weaknesses of the products

and processes which resulted from the Corsicana Project. All findings are not conclusive, however; they are based on data gathered from a very small portion of the intended target audience in a limited number of sites. This study nevertheless does tend to indicate that Project Echo is replicable with a potential for beneficial influence on the education of learning disabled students.

An endeavor such as Project Echo invariably stimulates the asking of questions not previously conceived and generates ideas for spin-off projects among the project's planners, participants, and observers. A series of recommendations, based on questions and ideas resulting from Project Echo, will conclude this report.

1) The development of additional instructional minimodules -- in more subject areas and for learning disabled students of other age groups -- should be seriously considered.

2) The screening and appraisal process, though imperfect, addresses a need of Texas Plan A schools for a reliable and valid means for diagnosis of learning disability. Further study is warranted.

3) The long-term effectiveness of Project Echo's observer school approach, as a strategy for dissemination of educational products and processes, should be investigated through a series of follow-up surveys conducted for the next several years.

TECHNICAL ATTACHMENTS

1. Academic Achievement

2. Student Attendance

3. Student Dropouts

4. Screening and Appraisal

5. Data Collection Forms

ATTACHMENT 1

ACADEMIC ACHIEVEMENT

To provide an achievement battery appropriate to the reading level of each identified learning disabled student, three different SATB forms were used. The form selected for each student was based on that student's reading comprehension grade equivalent (G.E.) as determined by the Stanford Diagnostic Reading Test administered as a part of the screening and appraisal process. Those with reading comprehension G.E.'s of 5.5 or lower were administered the SAT Intermediate Level 1 Battery (Int.-1). The SAT Intermediate Level 2 Battery (Int.-2) was administered to students with a reading comprehension G.E. between 5.6 and 7.0, while those with G.E.'s of 7.1 or higher received the SAT Advanced Level Battery (Adv.). The number of students tested with each form was:

SATB Form	N-Cohort 1	N-Cohort 2
Int.-1	16	48
Int.-2	16	78
Adv.	28	25
TOTAL	60	151

The SATB Int.-1, Int.-2, and Adv. Forms consist of 10, 9, and 8 subtests, respectively, as follows:

Language Arts	Int.-1	Int.-2	Adv.
Word Meaning	✓	✓	
Paragraph Meaning	✓	✓	✓
Spelling	✓	✓	✓
Word Study Skills	✓		
Language	✓	✓	✓

Mathematics	Int.-1	Int.-2	Adv.
Computation	✓	✓	✓
Concepts	✓	✓	✓
Applications	✓	✓	✓
Social Studies	✓	✓	✓
Science	✓	✓	✓

Since the Word Meaning and Word Study Skills subtests do not appear on all SATB forms, student sample sizes are reduced for these subtests.

For understanding the findings regarding question of interest 1, it is important to distinguish between absolute grade equivalent gain and rate of grade equivalent gain. Absolute gain is the arithmetic difference between grade equivalent values obtained at two different times, i.e., posttest G.E. minus pretest G.E. Rate of grade equivalent gain considers the absolute gain in relation to the time difference (expressed in G.E. units) between the pretest and posttest administrations. As the actual time difference between SATB administrations for Echo students varied between four months and eight months, the latter computation, rate of grade equivalent gain, was used for all analyses to provide a correction for administration time differences.

ATTACHMENT 2

The percentage attendance change for each student was individually computed by the formula:

$$\% \text{ Change} = (100)\ (\ (100 - I\%) - (100 - B\%)\ )/\ (100 - B\%)$$

where: I% = percent of days present during implementation year, 1975-76

B% = percent of days present during baseline years, 1972-75

This formula interprets the percent change as percent decrease in absenteeism so that a negative change is considered a desirable outcome. For evaluation question 2a, the percentage of students whose resulting % change value was -6.00 or a negative value of greater magnitude than -6.00 was tabulated. A similar procedure was employed for evaluation question 2b, except that a criterion value of -10.00 was used.

Group mean attendance rates were computed by the formula:

$$\bar{X} \text{ Attendance } \% = 100\ (\Sigma P)/\Sigma E$$

where: ΣP = sum of days present for all group members

ΣE = sum of days enrolled for all group members

For computations related to evaluation questions 2c and 2d, the % change formula (see above) was employed except that:

I% = mean attendance percentage of Echo students during implementation year, 1975-76 (both 2c and 2d)

B% = mean attendance percentage of non-Echo comparison students during implementation year, 1975-76 (2c only)

B% = mean attendance percentage of 75-76 Echo students during baseline years. 1972-75 (2d only)

ATTACHMENT 3

The percentage of dropouts (dropout rate) for each group was computed by the formula:

$$\text{Dropout Rate } (\%) = (100\ N_D) / N_E$$

where: N_D = number of students dropping out of school during the designated time period.

N_E = number of students enrolled in school during the designated time period.

To determine the dropout rate for the 15-year-old samples for the two years preceding Echo implementation, the average annual number of dropouts and average annual number of enrollees were used.

The percentage difference in dropout rate between an Echo group and a reference group was computed using the dropout rate percentages determined for the two contrasted groups with the following formula:

$$\% \text{ Difference} = (E\% - R\%) / R\%$$

where: $E\%$ = dropout rate percentage of Echo student group.

$R\%$ = dropout rate percentage of non-Echo reference group.

This formula interprets the percent difference as percent fewer dropouts in the Echo group so that a negative difference is considered a desirable outcome.

ATTACHMENT 4

A SCREENING PROCESS RELATED TO PROJECT ECHO

Bill D. Lamkin
Baylor University

EDUCATION SERVICE CENTER REGION XII
P. O. Box 1249 Waco, Texas 76703
401 Franklin Ave. Tel. 817-756-7494

4/16/75

ATTACHMENT 4

A SCREENING PROCESS RELATED TO PROJECT ECHO

BY DR. BILL D. LAMKIN
BAYLOR UNIVERSITY

For the initial screening of potential L/LD students to be involved in Project ECHO, two tests were administered in the Spring of 1975 to all 15 year old students: The Test of Academic Progress and the Cognitive Abilities Test. Since the chronological age of the students would place them in the tenth grade, the tenth grade levels of each test were administered. Tests were scored by the Houghton Mifflin Company and reported in terms of percentiles and standard scores.

Since the proposal called for identifying students on the basis of a discrepancy between expected achievement and actual achievement. the following process was developed for the initial screening:

1. The standard scores (equivalent to an IQ) from the Cognitive Abilities Test, Verbal Battery, was used as the estimate of the student's intellectual functioning. The Verbal Battery was chosen over the Quantitative and Non-verbal Battery since, according to the author, it is most closely related to school achievement. On page 3 of the Examiner's Manual, the author states, "Since the bulk of education is presented through verbal symbolism, the relevance of a verbal test for educational prognosis and diagnosis is clear. Tests of verbal reasoning have always been among the best predictors of educational progress."

2. Students whose IQ fell below 70 on the Verbal Battery, were considered to be possible candidates for a program for the mentally retarded and thus were not identified for the screening process.

3. Using the information presented on page 31 of the Manual for Administrators, Supervisors and Counselors for the Test of Academic Progress, Table I was developed to designate the expected standard score for the Test of Academic Progress in relationship to the standard scores for the Test of Cognitive Abilities ranging from 70 to 100. Expected level for students at the 100 score of above was placed at the Mean Scores for the tenth grade students. In this case, the Mean Standard Score on the Test of Academic Progress for tenth grade students was 51.

4. The screening guidelines called for "a discrepancy of two or more years between actual grade equivalent scores in reading comprehension or mathematics computation and

TABLE I

CAT Verbal IQ	Expected SS Level on TAP		
	Composition	Reading	Mathematics
100+	51	51	51
95-99	47	47	48
90-94	45	44	46
85-89	43	42	44
80-84	40	39	41
75-79	38	37	39
70-74	36	35	38

concept skill and the expected grade equivalent scores based on the student's mental age." Since test batteries administered to students in the ninth grade and above are not typically reported in grade placements, grade placement scores were not available. An examination of the norm tables revealed that three standard score points represented approximately one year in achievement; therefore, it was assumed that a discrepancy of 7 or more standard score points between expected achievement and actual achievement would represent a discrepancy of two years. This was adopted as the guideline.

5. All students who had a discrepancy of 7 or more points between their expected standard score and their actual standard score on composition, reading, or mathematics was identified for further screening.

The following steps will be included in the in-depth screening:

1. According to the proposal in order to be eligible for a designation as a learning disabled child, the student must have "a four year discrepancy from the national or local norms of the academic achievement of his age group." Therefore, the initial step in screening will be to examine the standard scores of students in the three areas considered in the original screening. Using the guideline for three standard scores points for each year of achievement, any student who scores 39 or above would fall less than 4 grade levels below his chronological age placement, and thus would be ineligible and should be omitted from further screening.

2. A second step involves an examination of the standard scores from the Test of Cognitive Abilities. Students who score below 70 were not identified for screening; however, some students with verbal scores above 70 may have scores on the other two sections of the tests below 70 and thus might need to be screened for possible inclusion in a program for the Mentally Retarded.

3. Those students remaining on the list should be given additional testing as follows:
   a. The WISC-R
   b. The Detroit Test of Learning Aptitude
   c. The Stanford Diagnostic Arithmetic Test
   d. The Stanford Diagnostic Reading Test

4. Data from these tests should be transferred to the L/LD Profile Analysis (Table II).

Name_____

Code#_____

L/LD PROFILE ANALYSIS

WISC-R

	Year	Month	Day
Date Tested			
Date of Birth			
Age			

	Scaled Score	IQ
Verbal Score		
Performance Score		
Full Scale Score		

VERBAL TESTS	Raw Score	Scaled Score
Information		
Similarities		
Arithmetic		
Vocabulary		
Comprehension		
Verbal Score		

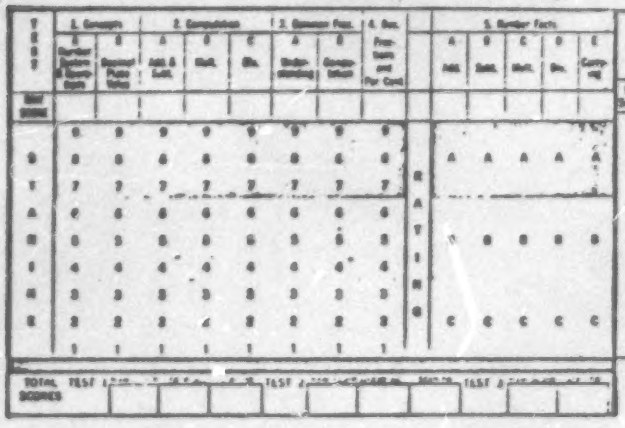
PERFORMANCE TESTS	Raw Score	Scaled Score
Picture Completion		
Picture Arrangement		
Block Design		
Object Assembly		
Coding		
Performance Score		

Detroit Tests of Learning Aptitude

	Score	Age	Rank	M. A.
1. Verbal Absurdities				
2. Verbal Opposites				
3. Motor Speed ____ Y. ____ S. ____ C.				
4. Auditory Attention Span for Unrelated Words — Simple Score ____ Weighted Score ____				
5. Social Adjustment S				
6. Visual Attention Span for Objects — Simple Score ____ Weighted Score ____				
7. Design				
8. Auditory Attention Span for Related Syllables				
9. Disarranged Pictures				
10. Oral Directions				

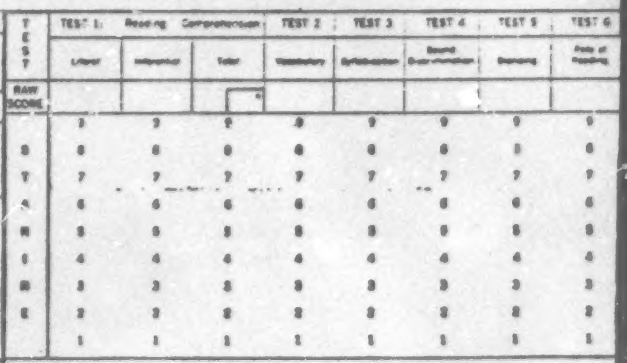
STANFORD DIAGNOSTIC ARITHMETIC TEST

FORM W LEVEL II



STANFORD DIAGNOSTIC READING TEST

FORM W LEVEL II



Comments:

5. Students whose Full Scale WISC-R IQ is 70 or below should be referred for possible placement in a program for the Mentally Retarded and are ineligible for inclusion in the L/LD program.

6. Data for students whose Full Scale IQ is above 70 should be transferred to the Worksheet to determine eligibility for the program (Table III).

TABLE III
WORKSHEET

Purpose: To determine if students meet criteria for Learning/Langu Disability classification.

Name: _____

____ Indicated

____ Not Indicated

Learning Disability by criteria of three or more years below mental age on three subtests of the Detroit Test of Learning Aptitude or two subtests in two different areas of the Detroit Test.

WISC-R full scale IQ = _____

C A (years and months) = _____

C A (months) = _____

M A (years and months) = _____

M A = I Q x C A (WISC-R Manual; page 188)

M A (in months) = _____ x _____ = _____

M A (in years and months) = $\frac{\text{M A (in months)}}{12}$ = _____ = _____

Critical Age for Detroit Subtests = Three years discrepancy between actual performance (Detroit subtests) and indicated ability (WISC-R full scale)

Critical Age = (M A) - (3 - 0)
+ _____ - (3 - 0) = _____

Areas on Detroit Subtests in which student's performance falls on or below the critical age:

	Score	Age
1. Verbal Absurdities		
2. Verbal Opposites		
3. Motor Speed 2' 3' 4'		
4. Auditory Attention Span for Unrelated Words — Simple Score / Weighted Score		
5. Social Adjustment B		
6. Visual Attention Span for Objects — Simple Score / Weighted Score		
7. Design		
8. Auditory Attention Span for Related Syllables		
9. Disarranged Pictures		
10. Oral Directions		

	Reasoning and Comprehension	Practical Judgment	Verbal Ability	Time and Space Relationships	Number Ability	Auditory Attentive Ability	Visual Attentive Ability
1. Verbal Absurdities	X		X				
2. Verbal Opposites			X				
3. Motor Speed and Precision		X					
4. Auditory Attention Span for Unrelated Words						X	
5. Social Adjustment - B	X						
6. Visual Attention Span for Objects							X
7. Memory for Designs				X			X
8. Auditory Attention Span for Related Syllables						X	
9. Disarranged Pictures	X			X			X
10. Oral Directions		X				X	X

TABLE III (CONTINUED)

DISCREPANCY BETWEEN MENTAL AGE AND ACHIEVEMENT LEVEL*

NAME: _____ CODE # : _____

INDICATED L/LD _____ M.A. _____

NOT INDICATED L/LD _____ EXPECTED ACHIEVEMENT LEVEL ___ IN GRADE EQUIVALENTS

QUESTIONABLE STATUS _____

DE	M.A.
	6
	7
	8
	9
	10
	11
	12
	13
9	14
0	15
1	16
2	17

	EXPECTED ACHIEVEMENT LEVEL	ACTUAL ACHIEVEMENT LEVEL	DISCREPAN
MATH CONCEPTS (1)	_____	_____	_____
MATH COMPUTATION (2)	_____	_____	_____
MATH TOTAL (AVG.)	_____	_____	_____
READING COMPREHENSION	_____	_____	_____

* Student must score at least four (4) years below chronological grade placement to be eligible. Thus all students must have one or more achievement test scores below 6.6.

PROJECT ECHO

I give permission for my child_____
to receive any psychological and/or educational testing that may be deemed advisable through Project ECHO

AND

I give permission for release of relevant data to any agency requesting such information; also, I give permission for the release of data or information held by other agencies to the staff of Project ECHO.

ALSO

I will secure a physical examination for my child by a physican.

_____
Signature of Parent or Guardian

_____
Date

The primary language spoken in the home of_____
child's name

is_____

_____
Signature of Parent or Guardian

ATTACHMENT 5

DATA COLLECTION FORMS

STUDENT ROSTER

(Target Students Only)

NUMBER	COLUMN 1 LAST	FIRST	MIDDLE	2 (M OR F) SEX	3 MO-DAY-YR BIRTHDATE	4 ETHNIC CODE	5
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							

SCHOOL _____

Page ___ of ___

INSTRUCTIONS

All information should be typed or printed according to the following instructions:

Column 1 - Self-explanatory.

Column 2 - Enter M or F.

Column 3 - Enter Mo-Day-Yr in numbers, such as 7-4-59.

Column 4 - Enter the appropriate ethnic Codes: 1 - Anglo American
2 - Negro American
3 - Mexican American
4 - Other

Column 5 - Leave blank.

PROJECT ECHO

SCORES FOR STANFORD ACHIEVEMENT TEST - INTERMEDIATE I FORM A

SCHOOL _____ ADMINISTRATION DATE _____

CHECK ONE: _____PRE _____POST

STUDENT NAME	TOTAL # CORRECT VOCABULARY	TOTAL # CORRECT READING COMPREHENSION	TOTAL # CORRECT WORD STUDY SKILLS	TOTAL # CORRECT MATH CONCEPTS	TOTAL # CORRECT MATH COMPUTATIONS	TOTAL # CORRECT MATH APPLICATIONS	TOTAL # CORRECT SPELLING	TOTAL # CORRECT LANGUAGE	TOTAL # CORRECT SOCIAL SCIENCE	TOTAL # CORRECT SCIENCE	TOTAL # CORRECT LISTENING COMPREHENSION
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											

PROJECT ECHO

SCORES FOR STANFORD ACHIEVEMENT TEST - INTERMEDIATE II FORM A

SCHOOL _____ ADMINISTRATION DATE _____

CHECK ONE: _____PRE _____POST

STUDENT NAME	TOTAL # CORRECT VOCABULARY	TOTAL # CORRECT READING COMPREHENSION	TOTAL # CORRECT WORD STUDY SKILLS	TOTAL # CORRECT MATH CONCEPTS	TOTAL # CORRECT MATH COMPUTATIONS	TOTAL # CORRECT MATH APPLICATIONS	TOTAL # CORRECT SPELLING	TOTAL # CORRECT LANGUAGE	TOTAL # CORRECT SOCIAL SCIENCE	TOTAL # CORRECT SCIENCE	TOTAL # CORRECT LISTENING COMPREHENSION

PROJECT ECHO

SCORES FOR STANFORD ACHIEVEMENT TEST - ADVANCED FORM A

SCHOOL _____ ADMINISTRATION DATE _____

CHECK ONE: _____PRE _____POST

STUDENT NAME	TOTAL # CORRECT VOCABULARY	TOTAL # CORRECT READING COMPREHENSION	TOTAL # CORRECT MATH CONCEPTS	TOTAL # CORRECT MATH COMPUTATION	TOTAL # CORRECT MATH APPLICATION	TOTAL # CORRECT SPELLING	TOTAL # CORRECT LANGUAGE	TOTAL # CORRECT SOCIAL SCIENCE	TOTAL # CORRECT SCIENCE
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									

PROJECT ECHO

SCORES FOR STANFORD ACHIEVEMENT TEST - INTERMEDIATE I FORM W

SCHOOL _____ ADMINISTRATION DATE _____

CHECK ONE: _____PRE _____POST

STUDENT NAME	TOTAL # CORRECT WORD MEANING	TOTAL # CORRECT PARAGRAPH MEANING	TOTAL # CORRECT SPELLING	TOTAL # CORRECT WORD STUDY SKILLS	TOTAL # CORRECT LANGUAGE	TOTAL # CORRECT ARITHMETIC COMPUTATION	TOTAL # CORRECT ARITHMETIC CONCEPTS	TOTAL # CORRECT ARITHMETIC APPLICATIONS	TOTAL # CORRECT SOCIAL STUDIES	TOTAL CORRECT SCIENCE
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										

PROJECT ECHO

SCORES FOR STANFORD ACHIEVEMENT TEST - INTERMEDIATE II FORM W

SCHOOL _____ ADMINISTRATION DATE _____

CHECK ONE: _____PRE _____POST

STUDENT NAME	TOTAL # CORRECT WORD MEANING	TOTAL # CORRECT PARAGRAPH MEANING	TOTAL # CORRECT SPELLING	TOTAL # CORRECT LANGUAGE	TOTAL # CORRECT ARITHMETIC COMPUTATION	TOTAL # CORRECT ARITHMETIC CONCEPTS	TOTAL # CORRECT ARITHMETIC APPLICATIONS	TOTAL # CORRECT SOCIAL STUDIES	TOTAL # CORRECT SCIENCE
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14 95									96
15									

PROJECT ECHO

SCORES FOR STANFORD ACHIEVEMENT TEST - ADVANCED FORM W

SCHOOL _____ ADMINISTRATION DATE _____

CHECK ONE: _____PRE _____POST

STUDENT NAME	TOTAL # CORRECT PARAGRAPH MEANING	TOTAL # CORRECT SPELLING	TOTAL # CORRECT LANGUAGE	TOTAL # CORRECT ARITHMETIC COMPUTATION	TOTAL # CORRECT ARITHMETIC CONCEPTS	TOTAL # CORRECT ARITHMETIC APPLICATIONS	TOTAL # CORRECT SOCIAL STUDIES	TOTAL # CORRECT SCIENCE
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14 97								98
15								

PROJECT ECHO

STUDENT ATTENDANCE RECORD FORM

This form is to be completed for all target and non-target students. The purpose of this data gathering instrument is to track the attendance patterns of students exposed to PROJECT ECHO vs those who are not involved in the project.

1. There are two forms, one for students who underwent PROJECT ECHO screening during the Spring of 1975, and a separate form for students screened during the Fall of 1975.

   NOTE: Attendance data for target and non-target 15-year-olds from 1974-75 which has already been recorded on last year's forms need not be transferred to the new forms. Only 1975-76 attendance data should be entered for those students.

2. Record the student's name (last name, first, middle initial), along with the school name. Place a check mark in the column following the name of each identified target student.
3. Record for each student the days present, the days absent, and the total days enrolled (the enrolled days should remain constant for most of the students). If a student was not enrolled during one of the reporting periods, record a dash (-) in the appropriate column/columns.
4. When the 1975-76 screening and appraisal has been completed and the new group of target students has been identified, indicate which students are PROJECT ECHO participants by placing a check mark in the column following each target student's name.

PROJECT ECHO

REVISED FORM

STUDENT ATTENDANCE RECORD FORM *

SCHOOL _____

Page ___ of ___

STUDENT NAME	Check if target student	1972-73 SCHOOL YEAR			1973-74 SCHOOL YEAR			1974-75 SCHOOL YEAR			1975-76 SCHOOL YEAR		
		DAYS PRESENT	DAYS ABSENT	DAYS ENROLLED	DAYS PRESENT	DAYS ABSENT	DAYS ENROLLED	DAYS PRESENT	DAYS ABSENT	DAYS ENROLLED	DAYS PRESENT	DAYS ABSENT	DAYS ENROLLED
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14 100													101
15													

*Use this form for students screened during the Spring semester of 1975.

PROJECT ECHO

STUDENT ATTENDANCE RECORD FORM *

SCHOOL _____

Page ___ of ___

	STUDENT NAME	Check if target student	1973-74 SCHOOL YEAR			1974-75 SCHOOL YEAR			1975-76 SCHOOL YEAR		
			DAYS PRESENT	DAYS ABSENT	DAYS ENROLLED	DAYS PRESENT	DAYS ABSENT	DAYS ENROLLED	DAYS PRESENT	DAYS ABSENT	DAYS ENROLLED
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											

*Use this form for students screened during the Fall semester of 1975.

REVISED FORM

PROJECT ECHO

DROPOUT DATA GATHERING FORM

Record the school from which the data are being collected and then record each of the requested total numbers of enrollees and dropouts for the specified school years.

Special care should be taken to separate the target and non-target students when entering data for 1975-76.

* * * * * * * * * *

School _____

Number of 15-year-old enrollees during the 72-73 school year _____

Number of 15-year-old dropouts during the 72-73 school year _____

Number of 15-year-old enrollees during the 73-74 school year _____

Number of 15-year-old dropouts during the 73-74 school year _____

Number of 15-year-old enrollees during the 74-75 school year _____

Number of 15-year-old dropouts during the 74-75 school year _____

* * * * * * * * * *

Number of 15-year-old target student enrollees during the 75-76 school year _____

Number of 15-year-old target student dropouts during the 75-76 school year _____

Number of 15-year-old non-target student enrollees during the 75-76 school year _____

Number of 15-year-old non-target student dropouts during the 75-76 school year _____

PROJECT ECHO

PARENT INVOLVEMENT ACTIVITY REGISTER

At each Parent Involvement Activity meeting, have a staff member positioned near the door of the meeting place to register each parent or parents as they enter. Ask the staff member to record the school name and date of the meeting prior to the parents arrival. The staff member should also log the parents' name and the names of all children in the family who are involved in PROJECT ECHO.

PROJECT ECHO

PARENT INVOLVEMENT ACTIVITY REGISTER

SCHOOL _____

DATE OF ACTIVITY _____

ACTIVITY NUMBER _____

	PARENT/PARENTS NAME	NAME OF CHILD/CHILDREN IN PROJECT ECHO
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		

PROJECT ECHO

DISSEMINATION CONFERENCE REGISTER

Have a staff member positioned near the door of the meeting place and ask him to record the name of each person attending the conference, as well as the organization represented.

The school name and date of the conference should be filled in on the register prior to the meeting.

PROJECT ECHO

DISSEMINATION CONFERENCE REGISTER

SCHOOL _____

DATE OF CONFERENCE _____

	NAME OF PARTICIPANT	ORGANIZATION REPRESENTED
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		

PROJECT ECHO
TEACHER CHECKLIST

Name of Teacher: _____

School/City: _____/_____

Date: _____

Check if: _____ Echo Teacher; _____ Mainstream Teacher _____

Please indicate which Minimodule is being discussed on the following Checklist.

Language Arts, Minimodule #_____
Science, Minimodule #_____
Mathematics, Minimodule #_____

Number of students completing this Minimodule: _____

1. How much time was required for most pupils to complete this Minimodule?

_____ minutes

2. Was the time for completion of this Minimodule:

_____ too short for most pupils
_____ about right for most pupils
_____ too long for most pupils

3. How much time was required for you to prepare for teaching this Minimodule?

_____ minutes

4. Was the quantity of materials included for use with the Minimodule:

_____ too many
_____ about right
_____ too few
_____ none were included (skip to item 6)

5. Was the quality of these materials included for use with the Minimodule:

_____ poor
_____ adequate
_____ excellent
_____ none were included

6. Was the perceived pupil interest in the Minimodule:

_____ low for most pupils
_____ adequate for most pupils
_____ high for most pupils

7. Was the vocabulary used in the student text:

_____ too difficult for most pupils

_____ appropriate for most pupils

_____ too easy for most pupils

8. Was the reading difficulty level of the student text:

_____ too complicated for most pupils

_____ appropriate for most pupils

_____ too simple for most pupils

9. Was the objective of this Minimodule:

_____ too difficult for most pupils

_____ appropriate for most pupils

_____ too simple for most pupils

10. Was the Mastery Test of this Minimodule:

_____ an unsatisfactory measure of actual pupil mastery

_____ an adequate measure of actual pupil mastery

_____ an excellent measure of actual pupil mastery

11. Did you have to make any changes or modifications in the Minimodule?

No _____ (skip to item 13)

Yes _____

12. If "yes", please specify the changes or modifications made in the Minimodule.

_____

_____

_____

_____

13. What improvements or modifications in the Minimodule would you recommend?

_____

_____

_____

_____

14. General Comments: _____

_____

_____

_____

_____

ACKNOWLEDGMENTS

Linda Goin Cardin, Greenville ISD, Site Coordinator
Mike Cardwell, Greenville ISD, Special Education Director
Jan Milner Corgan, Plano ISD, Site Coordinator
Roger Eaton, Sweetwater ISD, Special Education Director
Carmen Graham, Galveston ISD, Site Coordinator (1974-75)
Gloria Hein, Laredo ISD, Site Coordinator
Jim Kunetka, SEDL, Project Coordinator (1975-76)
Donna Livingston, Galveston ISD, Special Education Director
John McGinty, SEDL, Project Evaluation
Pat Ownby, Plano ISD, Special Education Director
Geraldine Parker, Sweetwater ISD, Site Coordinator
Don Partridge, TEA, Technical Advisory Committee
Nancy Patterson, Galveston ISD, Site Coordinator (1975-76)
Frances Quijano, Laredo ISD, Special Education Director
Jack Ross, ESC XII, Project Administrator
Tom Scannicchio, SEDL, Project Coordinator (1974-75)
Linda Scott, ESC XII, Project Director
Martha Smith, SEDL, Technical Advisory Committee
Don Weston, TEA, Technical Advisory Committee
Joan Williams, TEA, Technical Advisory Committee (1974-75)
Sharon Evans, Typist